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ABSTRACT

The booklet is designed to provide professional and lay personnel with guidelines for designing and developing programs and services for gifted and talented students in Connecticut. Author contributed chapters address programing, identification, and evaluation. Entries include the following titles and authors "What Makes Giftedness? Reexamining a Definition" by J. Renzulli; "Designing, Developing and Implementing a Program for the Gifted and Talented" by W. Vassar; "Developing Defensible Programs for the Gifted and Talented" by J. Renzulli and L. Smith; "Another Perspective on Identification Using the Baldwin Identification Matrix" by A. Baldwin; "Two Approaches to Identification of Gifted Students" by J. Renzulli and L. Smith; "Identification of Creative Talent Potential among the Handicapped" by E. Talada; "Conduct Evaluation Activities: What Measures Success?" by M. Humphrey; "Instructional Management Systems: A Model for Organizing and Developing Inservice Training Workshops (Applications for Trainers of Teachers of the Gifted and Talented)" by J. Renzulli; and "The State of Connecticut Clearinghouse for Gifted and Talented: An Overview" by J. Blanning. (SBH)

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CONN·CEPT I

CONNECTICUT'S PLANNING FOR THE GIFTED & TALENTED

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A PRIMER ON PROGRAM DEVELOPMENT FOR THE GIFTED & TALENTED

Practical Suggestions for Gifted & Talented Program Development

Fall 1979

Connecticut State Department of Education•Hartford
Division of Instructional Services
Bureau of Pupil Personnel and Special Educational Services

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FOREWORD

A large number of Connecticut school districts have come to recognize the importance of providing qualitatively different and innovative programs for gifted and talented children and youth. We are confident that the series of articles presented in this booklet will be helpful to school district personnel in designing and developing programs and services for gifted and talented students.

It is recommended that readers communicate their opinions of this publication to the Bureau. If this is done, the readers would serve to strenghten the future development and demonstration of materials in the areas of the gifted and talented.

Tom B. Gillung, Chief
Bureau of Pupil Personnel and
Special Educational Services
Connecticut State Department
of Education

INTRODUCTION

The State Department of Education provides local school district personnel with general and specific information and ideas that they need to design and develop programs to meet the needs of all children and youth. The diffusion of specific information, via up-dated materials, is intended to facilitate communication within the profession to keep professional and lay personnel abreast of the rapidly expanding body of literature in the education of the gifted and talented.

The Connecticut State Plan for the Gifted and Talented addresses the preparation and distribution of various types of materials on the gifted and talented to local school districts. This suggestion booklet is an activity effort on behalf of the Bureau of Pupil Personnel and Special Educational Services to meet the objectives of the State Plan.

The objective of this booklet is to provide professional and lay personnel with practical thoughts, ideas and guidelines for designing and developing programs and services for the gifted and talented. It is the intent of the professional staff to choose articles and materials that are suggested solutions to problems common to educational programming for the gifted and talented.

The content of the booklet is selective and focusses on topics of practical use to the reader. No attempt has been made to duplicate the textbooks or excellent collection of readings that exist in this area of education.

William G. Vassar
Consultant for Gifted and
Talented Programs

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CONNECTICUT'S PLANNING FOR THE GIFTED AND TALENTED

Practical Suggestions for Gifted and Talented Program Development

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Fall 1979

Connecticut State Department of Education
Division of Instructional Services
Bureau of Pupil Personnel and Special Educational Services
Hartford, Connecticut

What Makes Giftedness?
Reexamining a Definition

by Joseph S. Renzulli
Bureau of Educational Research
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Storrs

Throughout recorded history and undoubtedly even before records were kept, people have always been interested in men and women who display superior ability. As early as 2200 B.C. the Chinese had developed an elaborate system of competitive examinations to select outstanding persons for government positions, and down through the ages almost every culture has been fascinated by its most able citizens. Although the areas of performance in which one might be recognized as a gifted person are determined by the needs and values of the prevailing culture, scholars and laypersons alike have debated (and continue to debate) the age-old question: What makes giftedness?

The purpose of this article is therefore threefold. First, I shall analyze some past and current definitions of giftedness. Second, I shall review studies that deal with characteristics of gifted individuals. Finally, I shall present a new definition of giftedness that is operational, i.e., useful to school personnel, and defensible in terms of research findings.

THE DEFINITION CONTINUUM

Numerous conceptions and countless definitions of giftedness have been put forth over the years. One way of analyzing existing definitions is to view them along a continuum ranging from "conservative" to "liberal," i.e., according to the degree of restrictiveness used in determining who is eligible for special programs and services.

Restrictiveness can be expressed in two ways. First, a definition can limit the number of performance areas that are considered in determining eligibility for special programs. A conservative definition, for example, might limit eligibility to academic performance only and exclude other areas such as music, art, drama, leadership, public speaking, social service, and creative writing. Second, a definition may specify the degree or level of excellence one must attain to be considered gifted.

At the conservative end of the continuum is Lewis Terman's definition of giftedness, "the top 1% level in general intellectual ability, as measured by the Stanford-Binet Intelligence Scale or a comparable instrument."

In this definition restrictiveness is present in terms of both the type of performance specified (i.e., how well one scores on an intelligence test) and the level of performance one must attain to be considered gifted (top 1%). At the other end

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of the continuum may be found more liberal definitions, such as the following one by Paul Witty:

> There are children whose outstanding potentialities in art, in writing, or in social leadership can be recognized largely by their performance. Hence, we have recommended that the definition of giftedness be expanded and that we consider any child gifted whose performance, in a potentially valuable line of human activity, is consistently remarkable.

Although liberal definitions have the obvious advantage of expanding the conception of giftedness, they also open up two "cans of worms" by introducing the values issue (What are the potentially valuable lines of human activity?) and the age-old problem of subjectivity in measurement.

In recent years the values issue has been largely resolved. There are very few educators who cling to a "straight IQ" or purely academic definition of giftedness. "Multiple talent" and "multiple criteria" are almost the bywords of the present-day gifted student movement, and most educators would have little difficulty in accepting a definition that includes almost every area of human activity that manifests itself in a socially useful form.

The problem of subjectivity in measurement is not as easily resolved. As the definition of giftedness is extended beyond those abilities clearly reflected in tests of intelligence, achievement, and academic aptitude, it becomes necessary to put less emphasis on precise estimates of performance and potential and more emphasis on the opinions of qualified human judges in making decisions about admission to special programs. The issue boils down to a simple and yet very important question: How much of a trade-off are we willing to make on the objective/subjective continuum in order to allow recognition of a broader spectrum of human abilities? If some degree of subjectivity cannot be tolerated, then our definition of giftedness and the resulting programs will logically be limited to abilities that can only be measured by objective tests.

THE USOE DEFINITION

In recent years the following definition set forth by the U.S. Office of Education (USOE) has grown in popularity, and numerous states and school districts throughout the nation have adopted it for their programs:

> Gifted and talented children are those . . . who by virtue of outstanding abilities are capable of high performance. These . . . children . . . require differentiated educational programs and/or services beyond those normally provided by the regular school program in order to realize their (potential) contribution to self and society.

> Children capable of high performance include those who have demonstrated any of the following abilities or aptitudes, singly or in combination: 1) general intellectual ability, 2) specific academic aptitude, 3) creative or productive thinking, 4) leadership ability, 5) visual and performing arts aptitude, 6) psychomotor ability.

The USOE definition has served the very useful purpose of calling attention to a wider variety of abilities that should be included in a definition of giftedness, but at the same time it has presented some major problems. The first lies in its failure to include nonintellective (motivational) factors. That these factors are important is borne out by an overwhelming body of research, which I shall consider later.

A second and equally important problem relates to the nonparallel nature of the six categories included in the definition. Two of the six categories (specific academic aptitude and visual and performing arts aptitude) call attention to fields of human endeavor or general performance areas in which talents and abilities are manifested. The remaining four categories are more nearly processes that may be brought to bear on performance areas. For example, a person may bring the process of creativity to bear on a specific aptitude (e.g., chemistry) or a visual art (e.g., photography). Or the processes of leadership and general intelligence might be applied to a performance area such as choreography or the management of a high school year book. In fact, it can be said that processes such as creativity and leadership do not exist apart from a performance area to which they can be applied.

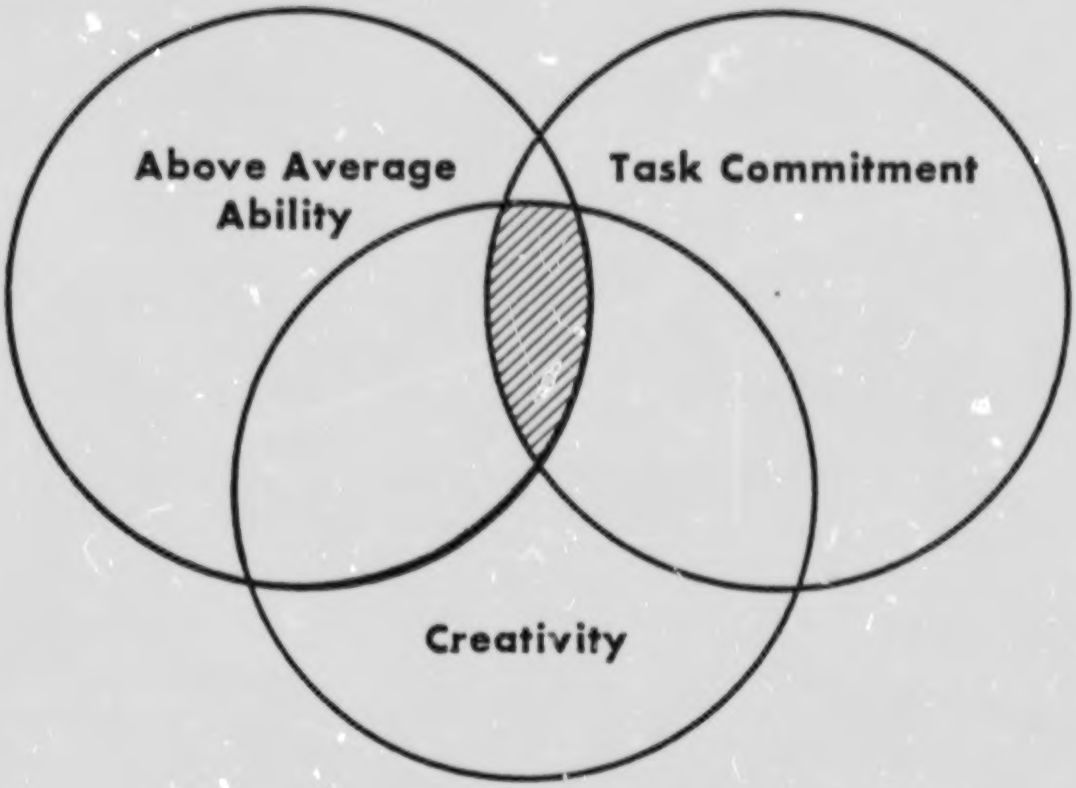
A third problem with the definition is that it tends to be misinterpreted and misused by practitioners. It is not uncommon to find educators developing entire identification systems based on the six USOE categories and in the process treating them as if they were mutually exclusive. What is equally distressing is that many people "talk a good game" about the six categories but continue to use a relatively high intelligence or aptitude score as a minimum requirement for entrance into a special program. Although both of these problems result from misapplication rather than from the definition itself, the definition is not entirely without fault, because it fails to give the kind of guidance necessary for practioners to avoid such pitfalls.

THE THREE-RING CONCEPTION

Research on creative/productive people has consistently shown that although no single criterion should be used to identify giftedness, persons who have achieved recognition because of their unique accomplishments and creative contributions possess a relatively well-defined set of three interlocking clusters of traits. These clusters consist of above-average though not necessarily superior general ability, task commitment, and creativity (see Figure 2). It is important to point out that no single cluster "makes giftedness." Rather it is the interaction among the three clusters that research has shown to be the necessary ingredient for creative/productive accomplishment. This interaction is represented by the shaded portion of Figure 2. It is also important to point out that each

Figure 2.

What Makes Giftedness


Above Average
Ability
Task Commitment
Creativity

cluster is an "equal partner" in contributing to giftedness. This point is important. One of the major errors that continues to be made in identification procedures is overemphasis on superior abilities at the expense of the other two clusters of traits.

ABOVE-AVERAGE GENERAL ABILITY

Although the influence of intelligence, as traditionally measured, quite obviously varies with areas of achievement, many researchers have found that creative accomplishment is not necessarily a function of measured intelligence. In a review of several studies dealing with the relationship between academic aptitude tests and professional achievement, M.A. Wallach has concluded that:

> Above intermediate score levels, academic skills assessments are found to show so little criterion validity as to be a questionable basis on which to make consequential decisions about students' futures. What the academic tests do predict are the results a person will obtain on other tests of the same kind.

Wallach goes on to point out that academic test scores at the upper ranges - precisely the score levels that are most often used for selecting persons for entrance into special programs - do not necessarily reflect the potential for creative/productive accomplishment. He suggests that test scores be used to screen out persons who score in the lower ranges and that beyond this point decisions be based on other indicators of potential for superior performance.

Numerous research studies support Wallach's finding that there is little relationship between test scores and school grades on the one hand and real world accomplishments on the other. In fact, a study dealing with the prediction of various dimensions of achievement among college students, made by J. L. Holland and A. W. Astin, found that

> . . . getting good grades in college has little connection with more remote and more socially relevant kinds of achievement; indeed, in some colleges, the higher the student's grades, the less likely it is that he is a person with creative potential. So it seems desirable to extend our criteria of talented performance.

A study by the American College Testing Program titled "Varieties of Accomplishment After College: Perspectives on the Meaning of Academic Talent" concluded:

> The adult accomplishments were found to be uncorrelated with academic talent, including test scores, high school grades, and college grades. However, the adult accomplishments were related to comparable high school nonacademic (extracurricular) accomplishments. This suggests that there are many kinds of talents related to later success which might be identified and nurtured by educational institutions.

The pervasiveness of this general finding is demonstrated by D.P. Hoyt, who reviewed 46 studies dealing with the relationship between traditional indications of academic success and post-college performance in the fields of business, teaching, engineering, medicine, scientific research, and other areas such as the ministry, journalism, government and miscellaneous professions. From this extensive review, Hoyt concluded that traditional indications of academic success have no more than a very modest correlation with various indicators of success in the adult world. He observes, "There is good reason to believe that academic achievement (knowledge) and other types of educational growth and development are relatively independent of each other."

These studies raise some basic questions about the use of tests in making selection decisions. The studies clearly indicate that vast numbers and proportions of our most productive persons are not those who scored at the ninety-fifth or above percentile on standardized tests, nor were they necessarily straight-A students who discovered early how to play the lesson-learning game. In other words, more creative/productive persons come from below the ninety-fifth percentile than above it, and if such cut-off scores are needed to determine entrance into special programs, we may be guilty of actually discriminating against persons who have the greatest potential for high levels of accomplishment.

TASK COMMITMENT

A second cluster of traits that are consistently found in creative/productive persons constitutes a refined or focused form of motivation known as task commitment. Whereas motivation is usually defined in terms of a general energizing process that triggers response in organisms, task commitment represents energy brought to bear on a particular problem (task) or specific performance area.

The argument for including this non-intellective cluster of traits in a definition of giftedness is nothing short of overwhelming. From popular maxims and autobiographical accounts to hard-core research findings, one of the key ingredients that has characterized the work of gifted persons is the ability to involve oneself totally in a problem or area for an extended period of time.

The legacy of both Sir Francis Galton and Lewis Terman clearly indicates that task commitment is an important part of the making of a gifted person. Although Galton was a strong proponent of the hereditary basis for what he called "natural ability" he nevertheless subscribed strongly to the belief that hard work was part and parcel of giftedness:

> By natural ability I mean those qualities of intellect and disposition which urge and qualify a man to perform acts that lead to reputation. I do not mean capacity without zeal, nor zeal without capacity, nor even a combination of both of them, without an adequate power of doing a great deal of very laborious work. But I mean a nature which, when left to itself,

> will, urged by an inherent stimulus, climb the path that leads to eminence and has strength to reach the summit -- on which, if hindered or thwarted, it will fret and strive until the hindrance is overcome, and it is again free to follow its laboring instinct.

Terman's monumental studies undoubtedly represent the most widely recognized and frequently quoted research on the characteristics of gifted persons. Terman's studies, however, have unintentionally left a mixed legacy, because most persons have dwelt (and continue to dwell) on "early Terman" rather than on the conclusions he reached after several decades of intensive research. Therefore it is important to consider the following conclusion, reached after 30 years of follow-up studies on his initial population:

> . . . (A) detailed analysis was made of the 150 most successful and 150 least successful men among the gifted subjects in an attempt to identify some of the nonintellectual factors that affect life success . . . Since the less successful subjects do not differ to any extent in intelligence as measured by tests, it is clear that notable achievement calls for more than a high order of intelligence.
>
> The results (of the follow-up) indicated that personality factors are extremely important determiners of achievement . . . The four traits on which (the most successful groups) differed most widely were persistence in the accomplishment of ends, integration toward goals, self-confidence, and freedom from inferiority feelings. In the total picture the greatest contrast between the two groups was in all-around emotional and social adjustment and in drive to achieve.

Although Terman never suggested that task commitment should replace intelligence in our conception of giftedness, he did state that "intellect and achievement are far from perfectly correlated."

Several more recent studies support the findings of Galton and Terman and have shown that creative/productive persons are far more task oriented and involved in their work than are people in the general population. Perhaps the best known of these studies is the work of A. Roe and D. W. MacKinnon. Roe conducted an intensive study of the characteristics of 64 eminent scientists and found that all of her subjects had a high level of commitment to their work. MacKinnon pointed out traits that were important in creative accomplishments: "It is clear that creative architects more often stress their inventiveness, independence, and individuality, their enthusiasm, determination, and industry."

Extensive reviews of research carried out by J.C. Nicholls and H.G. McCurdy found patterns of characteristics that were consistently similar to the findings reported by Roe and MacKinnon. Although the researchers cited thus far used different procedures and dealt with a variety of populations, there is a striking similarity in their major conclusions. First, academic ability (as traditionally measured by tests or grade-point averages) showed limited relationships to creative/productive accomplishment. Second, nonintellectual factors, and especially those that relate to task commitments, consistently played an important part in the cluster of traits that characterize highly productive people. Although this second cluster of traits is not as easily and objectively identifiable as are general cognitive abilities, they are nevertheless a major component of giftedness and should therefore be reflected in our definition. (See Figure 3)

CREATIVITY

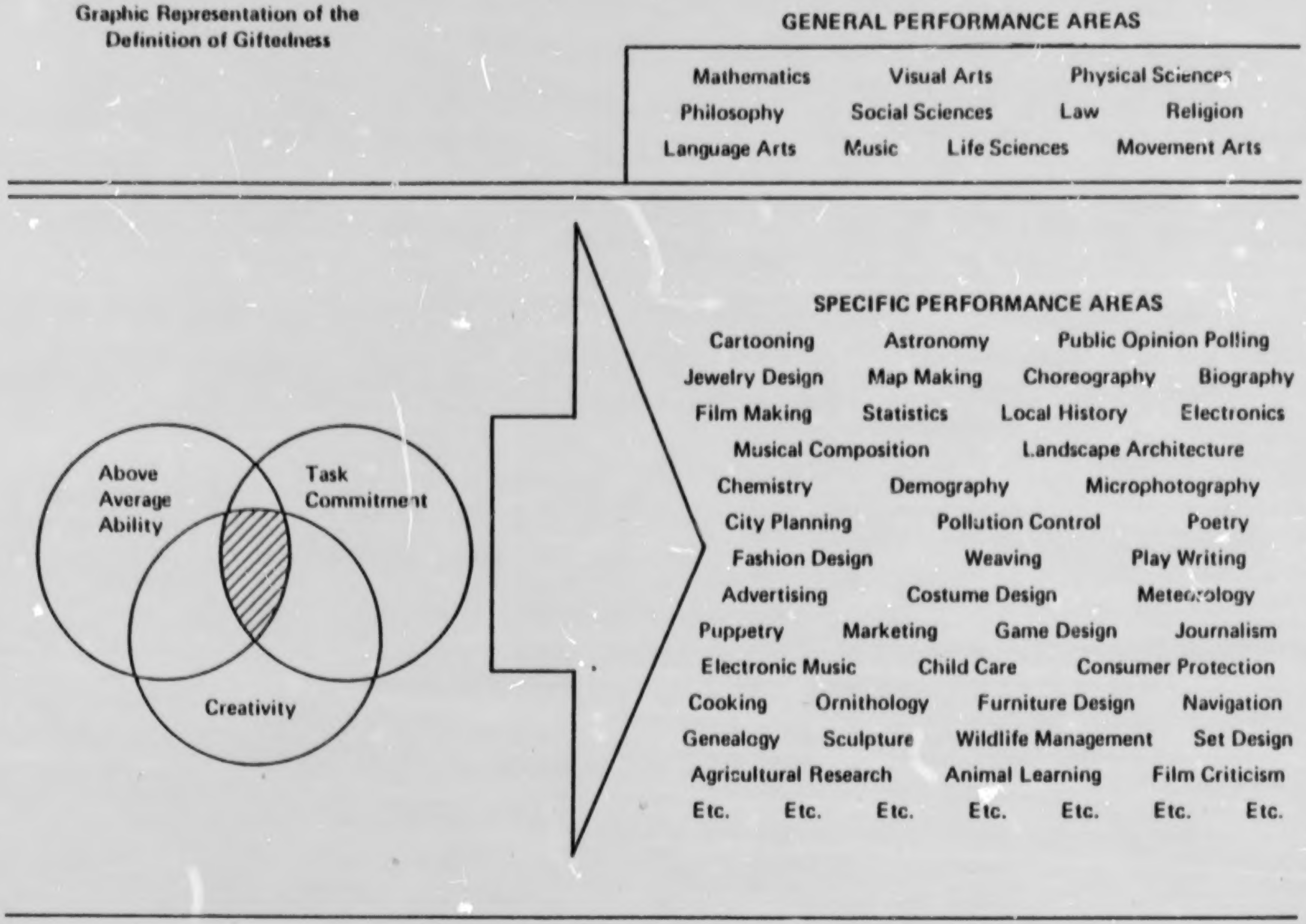
The third cluster of traits that characterize gifted persons consists of factors that have usually been lumped together under the general heading of "creativity." As one reviews the literature in this area, it becomes readily apparent that the words "gifted," "genius," and "eminent creators" or "highly creative persons" are used synonymously. In many of the research projects discussed above, the persons ultimately selected for intensive study were in fact recognized because of their creative accomplishments. In MacKinnon's study, for example, panels of qualified judges (professors of architecture and editors of major American architectural journals) were asked first to nominate and later to rate an initial pool of nominees, using the following dimensions of creativity: 1) originality of thinking and freshness of approaches to architectural problems, 2) constructive ingenuity, 3) ability to set aside established conventions and procedures when appropriate, and 4) a flair for devising effective and original fulfillments of the major demands of architecture: namely, technology (firmness), visual form (delight), planning (commodity), and human awareness and social purpose.

When discussing creativity, it is important to consider the problems researchers have encountered in establishing relationships between scores on creativity tests and other more substantial accomplishments. A major issue that has been raised by several investigators deals with whether or not tests of divergent thinking actually measure "true" creativity. Although some validation studies have reported limited relationships between measures of divergent thinking and creative performance criteria, the research evidence for the predictive validity of such tests has been limited. Unfortunately, very few tests have been validated against real-life criteria of creative accomplishment, and in cases where such studies have been conducted the creativity tests have done poorly. Thus, although divergent thinking is indeed a characteristic of highly creative persons, caution should be exercised in the use and interpretation of tests designed to measure this capacity.

Given the inherent limitations of creativity tests, a number of writers have focused attention on alternative methods for assessing creativity. Among others, Nicholls suggests that an analysis of creative products is preferable to the trait-based approach in making predictions about creative potential, and Wallach proposes that student self-reports about creative accomplishment are sufficiently accurate to provide a usable source of data.

Figure 3.

Graphic Representation of the Definition of Giftedness



GENERAL PERFORMANCE AREAS

Mathematics   Visual Arts   Physical Sciences
Philosophy   Social Sciences   Law   Religion
Language Arts   Music   Life Sciences   Movement Arts

SPECIFIC PERFORMANCE AREAS

Cartooning   Astronomy   Public Opinion Polling
Jewelry Design   Map Making   Choreography   Biography
Film Making   Statistics   Local History   Electronics
Musical Composition   Landscape Architecture
Chemistry   Demography   Microphotography
City Planning   Pollution Control   Poetry
Fashion Design   Weaving   Play Writing
Advertising   Costume Design   Meteorology
Puppetry   Marketing   Game Design   Journalism
Electronic Music   Child Care   Consumer Protection
Cooking   Ornithology   Furniture Design   Navigation
Genealogy   Sculpture   Wildlife Management   Set Design
Agricultural Research   Animal Learning   Film Criticism
Etc.   Etc.   Etc.   Etc.   Etc.   Etc.   Etc.

---

*This arrow should be read as ". . .brought to bear upon. . ."

Although few persons would argue against the importance of including creativity in a definition of giftedness, the conclusions and recommendations discussed above raised the haunting issue of subjectivity in measurement. In view of what the research suggests about the questionable value of more objective measures of divergent thinking, perhaps the time has come for persons in all areas of endeavor to develop more careful procedures for evaluating the products of candidates for special programs.

DISCUSSION AND GENERALIZATIONS

The studies reviewed above lend support to a small number of basic generalizations that can be used to develop an operational definition of giftedness. The first is that giftedness consists of an interaction among three clusters of traits - above-average but not necessarily superior general abilities, task commitment, and creativity. Any definition or set of identification procedures that does not give equal attention to all three clusters is simply ignoring the results of the best available research dealing with this topic.

Related to this generalization is the need to make a distinction between traditional indicators of academic proficiency and creative productivity. A sad but true fact is that special programs have favored proficient lesson learners and test takers at the expense of persons who may score somewhat lower on tests but who more than compensate for such scores by having high levels of task commitment and creativity. Research has shown that members of this group ultimately make the most creative/productive contributions to their respective fields of endeavor.

A second generalization is that an operational definition should be applicable to all socially useful performance areas. The one thing that the three clusters discussed above have in common is that each can be brought to bear on a multitude of specific performance areas. As was indicated earlier, the interaction or overlap among the clusters "makes giftedness," but giftedness does not exist in a vacuum. Our definition must, therefore, reflect yet another interaction; but in this case, it is the interaction between the overlap of the clusters and any performance area to which the overlap might be applied. This interaction is represented by the large arrow in Figure 2.

A third and final generalization is concerned with the types of information that should be used to identify superior performance in specific areas. Although it is a relatively easy task to include specific performance areas in a definition, developing identification procedures that will enable us to recognize specific areas of superior performance is more difficult. Test developers have thus far devoted most of their energy to producing measures of general ability, and this emphasis is undoubtedly why these tests are relied upon so heavily in identification. However, an operational definition should give direction to needed research and development, especially as these activities relate to instruments and procedures for student selection. A defensible definition can thus become a model that will generate vast amounts of appropriate research in the years ahead.

A DEFINITION OF GIFTEDNESS

Although no single statement can effectively integrate the many ramifications of the research studies described above, the following definition of giftedness attempts to summarize the major conclusions and generalizations resulting from this review of research:

> Giftedness consists of an interaction among three basic clusters of human traits - these clusters being above-average general abilities, high levels of task commitment, and high levels of creativity. Gifted and talented children are those possessing or capable of developing this composite set of traits and applying them to any potentially valuable area of human performance. Children who manifest or are capable of developing an interaction among the three clusters require a wide variety of educational opportunities and services that are not ordinarily provided through regular instructional programs.

A graphic representation of this definition is presented in Figure 2. The definition is an operational one because it meets three important criteria. First, it is derived from the best available research studies dealing with characteristics of gifted and talented individuals. Second, it provides guidance for the selection and/or development of instruments and procedures that can be used to design defensible identification systems. And finally, the definition provides direction for programming practices that will capitalize upon the characteristics that bring gifted youngsters to our attention as learners with special needs.

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DESIGNING, DEVELOPING AND IMPLEMENTING A PROGRAM FOR THE GIFTED AND TALENTED

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1. INTRODUCTION

During the past few years, the education of the gifted and talented has once again come to the forefront of thinking in the minds of many professional and lay personnel. Many factors have brought about a rethinking of the needs of our nation's human resources. More students are being recognized, for their demonstrated and potential talents, more States and local school districts have taken a greater interest in special programming and the Federal sector has taken a more active leadership role in establishing such programming as a high priority for such children and youth.

Local school administrators and members of their staff should read and study the most recent research and studies which show that such children and youth in later life very often make outstanding contributions to our society, especially in the arts, politics, and business and industry. The concern of professional educators is moving in a more positive way to identify and program for thousands of children and youth who have outstanding ability or the potential to gain such ability through special programs in local school districts.

The State of Connecticut has consistently funded school districts for the past dozen years who design, develop and implement special programs for many types of gifted and talented children and youth. State studies conducted over the past dozen years indicate a direct correlation between consistent growth in school district programs and the following provisions by a State: (1) fulltime consultative services from the State Department of Education; (2) a special state statute with appropriate funding to assist school districts in developing and implementing programs, and (3) maintaining a strong professional development program through college and university training programs and offer a wide variety of inservice training opportunities to lay and professional personnel. Connecticut has all of these provisions in place so that school districts have the necessary technical assistance to design and develop the programs, sufficient State funding to operate the programs and sufficient numbers of trained professionals to implement the programs for children and youth.

For those professionals who have interest in a more coordinated effort between general education and special education for the gifted and talented, the fact should be recognized that every school in the nation has some children and youth with demonstrated and/or potential to gain extraordinary ability levels. How a classroom teacher, curriculum coordinator, or any other professional educators perceives the needs of the gifted and talented and how they attempt to provide services and/or programs to meet them will be determining factors in how successfully a school district meets these needs.

The gifted and talented have needs to:

-- understand, develop and utilize the higher mental processes associated with high levels of academic and artistic talent

-- have time to meet, interchange and dialogue with their academic, artistic and leadership peers (those with similar interests, talents, etc.)

-- have the time, space, human resources necessary to assist in the development of an individual talent or ability

-- understand, appreciate and study the diversity existing among individuals

-- have the availability of an appropriate screening and identification process and access to specialized counseling

-- learn to develop learning and life styles commensurate with their particular profile of abilities and talents

-- have the opportunity to assess his or her own unique talents and interests

Professional educators should recognize these special needs of the gifted and talented as they do those of other exceptional children. Administrators, at all levels, should provide leadership that stimulates the identification and programming for such children and youth throughout the school district. Curriculum and instructional personnel need to be actively involved, in such programming, on a continuing basis if a school district is going to provide a meaningful program for such children and youth. From the beginning, it must be obvious that any differentiated instruction and administrative designs for the gifted and talented should be articulated and coordinated with all levels of general education and any other special provisions being made in the school district.

Educators should be extremely aware of the following:

-- state and federal laws, regulations and guidelines relative to the gifted and talented

-- local policies and position statements related to such children and youth

-- the attitudes of the various publics in the community

-- various state and federal resources relating to all aspects of the gifted and talented

One important idea should be kept in the forefront of any discussion of a program in a school district. It should be indicated that a special program for any exceptional child is basically one segment of meeting the needs of individual children or groups of children. It should not be a design assigning special privileges to a select few for a narrow purpose.

II. Broadening the Concept of Giftedness

When you are discussing the provision of special programs and services to the gifted and talented, you should discuss who these children and youth are within a broadened framework of reference. The broadened concept of giftedness developed by researchers in the sixties should be fully explored before a school district conducts a needs assessment to determine which types of youngsters have the greatest need for programs and services.

Although research has indicated a broader spectrum of children and youth to be served, many planning groups in school districts have limited their thinking to those children of high I.Q., highly motivated children with demonstrated ability. This is but one segment of the gifted and talented population as we should perceive in the eighties. In the past few years, widespread attempts have been made to include many other types of gifts and talents.

-- Children and Youth who are Capable of High Creative-Productive Thinking

These are youngsters who deal with their thinking and feeling processes in an extremely fluent, flexible, original and/or divergent manner. Many school districts identifying and programming for this type of child utilize the Torrance Tests of Creativity along with various check lists and rating scales developed to assist the professional staff in better identifying this specific segment of the gifted and talented population.

-- Bright Underachievers

Many times the school districts are concerned about the pupil who scores consistently at a very superior level on appropriate standardized tests (I.Q., achievement, aptitude, etc.), and should by such testing indicators be functioning at a high level. However, these children and youth fail to make it in general education and are not eligible for a regular "gifted" program due to the lack of classroom achievement. It is well established that such children and youth may have a number of social and emotional factors inhibiting their path to maximizing their potential. This target group of children and youth is a very real part of the total picture of education of the gifted and talented. Impact types of programs would certainly retrieve a large number of talented youth who may be otherwise lost to society forever.

-- Children with Potential to Gain Very Superior Levels of Ability

These are children and youth who live in sparsely populated and urban areas who because of certain economic, cultural and environmental factors do not demonstrate high levels of ability in their environmental setting. They are children and youth who have potential to gain high levels of ability, but who have not had the advantages of children in other sectors of our society. Recent research has shown us that we are able to uncover such potential extraordinary abilities and provide special programs to meet their unusual needs. A number of urban and rural areas throughout the nation, have identified and provided special programming for such children and youth.

-- Children and Youth who Exhibit Superior Ability for Leadership

These are pupils who would be identified subjectively as possessing superior psychosocial skills and having human relations skills appropriate to identifying high levels of leadership. There are certain personality traits and skills which can be identified and nurtured at an early age through special programs and/or services for greater talent retrieval within our society.

-- Children and Youth who have Outstanding Talent in the Creative Arts

--- MUSIC - pupils who exhibit evidence of a high level of advanced skills in performance and/or imaginative insight into composition. Pupils who possess the potential to gain such high levels of performance and/or composition.

--- VISUAL ARTS - those who possess outstanding talent or the potential to gain such talent in the areas of sculpture, oils, waters, media, etc.

--- PERFORMING ARTS - these are children and youth who have demonstrated or potential ability in the theatre arts, dance, etc.

You should consider the fact that those who excel in the various areas of the creative arts need not be those who are also successful in their academic pursuits. Too often, large numbers of pupils have been "screened out" or eliminated from special programs in the arts because they did not perform at a high academic level in the school setting.

-- Children and Youth who have Very Superior Skills in the Vocational Sector

Pupils who exhibit evidence of advanced skills in the various technical specialties such as automotive mechanics, machine designing, carpentry, electricity, etc.

-- Handicapped Children and Youth with Special Talents - Demonstrated or Potential

Recent research and various studies have indicated that many talented children and youth with handicapping conditions are not being identified or served by special programs. These studies have uncovered a number of ways for such children and youth to be identified and served within the context of special programs for the gifted and talented.

When you consider all of the aforementioned sub-groups, you have truly broadened your perspective of the many types of gifted and talented children and youth really exist in all sectors of society. You have moved from consideration of a narrow spectrum of youngsters to one of searching for many other kinds of gifts and talents that can be reasonably identified and programmed for in the school setting.

III. Designing Programs and Services

You should begin by developing the purposes for special programs and services for the gifted and talented you plan to serve. A planning committee should consider the following sequential steps as they design, develop and implement programs and services for the gifted and talented:

A. Exploratory Stage

1. Establish need for such a special program in the district
2. Decide to design and develop the special program
3. Delegate responsibility to Planning and Placement Group
4. Appoint Planning and Placement Group -

   Include administrators, pupil personnel and instructional staff, lay representatives, parents, children and youth, etc.
5. Develop time line for developing program
6. Develop district position statement on gifted and talented
7. Design the purposes for the gifted and talented program reflecting all local and State ramifications

B. Initiatory Stage

1. Begin planning district program
   a. Assess needs of your school district
   b. Discuss recent research in field of gifted and talented
   c. Survey status of special programs in district
2. Define gifted and talented
   a. Review your position statement and purposes
   b. Check local situations, values, theories, political realities, etc.

3. Determine target group(s) and grade level(s) of program

   a. Study local and state incidence statistics of various target groups
   b. Review other available information which apply to your definition
   c. Budgetary factors (limitations of staff)
   d. Determine target group(s) to be served (I.E. high creatives, highly motivated, etc.)
   e. Determine grade levels to be involved
   f. Group(s) should reflect and mirror your communities population makeup

C. Goals and Objectives Stage

1. Synthesize purposes into program goals

2. Determine program goals for children and youth

3. Translate program goals to specific objectives

   a. Pupil - what the pupils will accomplish
   b. Program - what the program will accomplish
   c. Teacher - what are they in terms of environment, personal and process

4. Consider evaluation processes to measure various objectives

D. Program Planning Stage

1. Review the target group(s) to be involved in special programs

2. Review grade levels and number of students to be served

3. Develop appropriate screening and identification procedures

   a. Utilize appropriate multiple criteria for target group(s)
   b. Review literature, research and other information to comprehend the complexity of process
   c. Consider characteristics of various types of gifted and talented
   d. Study various types of instrumentation (tests, checklists, rating scales, etc.)

4. Develop administrative designs for placement of children and youth for instructional purposes

   a. Various designs - regular classroom, special classes, resource room, regional approach, itinerant teacher, etc.

   b. Consider transportation, availability of facilities, geography, community feelings, values, etc.

5. Develop strategies for differentiation of instruction

    a. Differentiation of Curriculum - various adaptations, theories and approaches should be studied
    b. Differentiation of Teaching Strategies - appropriate for the target group(s) being served
    c. Involvement of Community Resources - (human and physical)

6. Develop time frame to be spent by children and youth in programs

    a. Determine the length of time differentiated instruction is needed
    b. Consider the availability of special teachers

7. Develop plan to articulate and coordinate special programs with general programs and between grade level and system levels in the district

E. Personnel Development Stage

1. Select professional and para professional personnel

    a. Develop criteria or characteristics for staff selection
    b. Criteria should reflect how personnel will be utilized

2. Provide opportunities for continuous inservice training for special and general staff of district on gifted and talented

    a. Design specific training activities for various groups
    b. Identify specific inservice resources (consultants, materials, etc.)

3. Develop training for ancillary staff (counselors, psychologists, social workers, etc.)

F. Evaluation and Budgetary Stage

1. Develop plan for evaluation of special programs

    a. Establish and communicate evaluative criteria
    b. Design system for monitoring program
    c. Develop design for gathering and compiling data
    d. Evaluate for who? what?

2. Budget for Program

    a. Instructional Staff
    b. Ancillary Staff (guidance, etc.)
    c. Materials and equipment
    d. Rental of facilities (if necessary)
    e. Inservice Training
    f. Evaluation
    g. Others

IV. Expansion of Major Program Components

A. Screening and Identification

At best, the process of screening and identifying the various types of gifted and talented children and youth is a very complex process. We will probably never reach ultimate sophistication in this process for all of these children and youth. However, the utilization of a multi-criteria approach will assist you in becoming more sophisticated in the process of identifying each target group you are interested in programming for in the district. Besides the many available standardized tests, there are many factors that can be subjectively evaluated to identify those children and youth with both demonstrated and potential talent.

There are numerous rating scales, teacher and parent checklists, anecdotal and professional observations, parent and peer interviews, etc. The key factor in the process is that you utilize a variety and multiplicity of screening and selection procedures. However, some pitfalls should be avoided.

1. limiting criteria to one or two factors creates a multitude of problems from a professional level and a public acceptance viewpoint
2. rigid utilization of criteria should be avoided, criteria should be reasonably flexible
3. various target groups should not be identified with similar criteria. Each group should be screened as a separate entity

The following resources are examples of screening and identification resources to screen and identify various types of gifted and talented children and youth:

CONN-CEPY IV
Task Force Report on Identifying
the Talented in the Creative Arts
Connecticut State Department of Education. 1979.

CONN-CEPT V
Task Force Report on Identification
Connecticut State Department of Education.
Revised Edition 1978.

The Identification of the Gifted and Talented
Ruth A. Martinson. National/State Leadership
Training Institute on the Gifted and Talented.
Ventura, California School District
535 East Main Street, Ventura, California 93001

The following Connecticut school districts provide examples of developing noteworthy screening and identification of different types of talent within our own state:

Bristol Public Schools	George Lagios
East Hartford Public Schools	Sharon Gotch Cobb
Ellington Public Schools	Frank Millbury
Litchfield Public Schools	Sandra Turnquist
Mansfield Public Schools	Betty Shibles
Norwalk Public Schools	Donald Rogers
Torrington Public Schools	Sally Reis
Regional School District #10	Margaret Cellerino
Marine Studies (ACES)	Larry Shaeffer
Center for Creative Techniques	Mary Hunter Wolf
Educational Center for the Arts	Jim Undercofler

For full addresses, please refer to:

CONN-CEPT VIII - Sample List of Connecticut Programs for Gifted and Talented. Connecticut State Department of Education. Revised Fall 1979.

The above-mentioned school districts use both objective (tests, etc.) and subjective checklists; rating scales, etc., to assist in screening and eventually identifying many types of gifted and talented children and youth.

In the creative arts, we have to depend almost solely on subjective analysis. Much success has been realized in utilizing the professional judgments of artists, musicians, sculptors, etc. to determine advanced skills, imaginative insight, intense interest and involvement in such areas of talent.

The following researchers have developed various checklists, rating scales and packets for identifying many types of giftedness and talent:

Connecticut

Joseph S. Renzulli	University of Connecticut
Alan J. White	ACES - New Haven
Mary Hunter Wolf	Center for Creative Techniques
Jean Blanning	Connecticut Clearinghouse on Gifted and Talented

Other States

Alexinia Baldwin	State University of New York at Albany
John Gowan	Northridge, California
John Grossi	Council for Exceptional Children, Clearinghouse on Gifted and Talented Reston, Virginia
Paul Plowman	California State Department of Education
Irving Sato	National/State Leadership Training Institute on Gifted and Talented Los Angeles, California

Don Treffinger State University of New York at Buffalo
Katherine Bruch University of Georgia
Paul Torrance University of Georgia

B. Administrative Design

The administrative design of a differentiated program and/or service for gifted and talented children and youth means specifically the organizational design we use to provide time sequence and space, staffing and instruction to such children and youth in such a special program. A number of designs should be considered by instructional leaders. For example, special classes. Although this design may have some merits in certain communities, it does not enjoy much popularity throughout the nation, since it completely separates such children and youth from their peer groups. Professional educators should consider a number of alternative designs before making a decision as to which one the school district will design and develop. Many factors may have to be considered including geography, facilities available, transportation, along with political, social and educational implications.

There are a varying number of semi-separation designs in which the youngsters spend some of their time in their regular classes and an appropriate sequence of time in a special setting. For example, the resource room design, the itinerant teacher approach, the cluster approach, a district-wide center, a regional center are only a few of the semi-separation designs which are used to bridge the gap between the students' special and general education needs. Administrative designs may be considered a secondary component of programming, but for the most part will be molded by the philosophy and objectives of your school district, available facilities, transportation, staff and the feelings of the community.

Connecticut has a number of different types of semi-separation designs:

- Simsbury - elementary school programs for the gifted and talented where the children are served in their home schools by "traveling teachers of the gifted." Six elementary schools and the middle school share four (4) fulltime teachers in grades 3-8.
- Litchfield, Torrington and Stamford - elementary pupils are transported to centers within the district for special programs. These children are serviced by a cluster of teachers in the center. The children usually spend from 20% to 50% of their school time in the special setting.
- Talcott Mt. Science Center (Avon) - a center built on a former NIKE site for highly talented children and youth in astronomy, meterology, geology, etc. This center services the entire state and provides special programs to school districts for such children and youth. They also conduct Saturday seminars (3 hours) for independent research in such sciences as chronobiology, astronomy, geology, computer, ecology, etc.

- Educational Center for the Talented in the Arts (New Haven) - an eighteen school district high school center for the talented in the areas of music, dance, the visual arts, media, etc. Pupils spend half of their day at their home high school and half in their craft area at the ECA.

- Center for Creative Youth (Wesleyan University (Middletown) - a five week statewide summer program for the talented in the arts. Pupils are in residence at the university with outstanding mentors from the areas of the visual and performing arts. The environment of the Wesleyan University Visual and Performing Arts Center adds immeasurably to this exciting summer program.

C. Differentiation of Instruction

Many agree that the most important component of the special program for the gifted and talented is that of differentiation of instruction. Children and youth identified in specific categories of talents should be provided with differentiated instruction tailored to his or her special needs. If you attempt to continue the route of "more of the same," "enrichment undefined" or "expediency acceleration," the program can well be doomed to failure.

The history of gifted and talented education has reflected the rise and fall of numerous programs for the gifted and talented throughout our nation. Administrators and policy makers should analyze the various reasons for failure of many programs over the past fifty years. A detailed study might indicate such elusive factors as "public apathy," "lack of funds," etc. However, one of the most glaring problems is the one of instruction.

If one indicates that special programs are needed for the gifted and talented, one may obviously infer that instruction in the general curriculum is inadequate to meet the special needs of such children and youth. This position should be carried one step further and it would indicate that differentiated instruction is the major concept missing in meeting such needs.

Instruction denotes both curriculum design and teaching strategies. If you continue to develop this differentiated rationale, you are saying that because these children and youth have different needs, then we must provide differentiated curriculum (learning experiences and activities) and that professional and lay personnel working with such children and youth should be trained to use differentiated teaching strategies (methods) to make the entire process more effective.

1. Differentiated Curriculum - There are a number of examples of ways to develop such approaches for the gifted and talented. The following are a few examples:

CONN-CEPT II - Differentiated Curriculum for the Gifted and Talented in Science and Mathematics. Connecticut State Department of Education. 1978.

CONN-CEPT III - Once Upon A Building - Creating a Differentiated Learning Environment for the Gifted and Talented. Cobb, S. et al., Connecticut State Department of Education (2nd Printing, 1979).

CONN-CEPT VII - Task Force Report on Curriculum for the Gifted and Talented. Connecticut State Department of Education. Revised 1978.

The Enrichment Triad Model: A Guide for Developing Defensible Programs for the Gifted and Talented. Renzulli, J.S. Creative Learning Press, Mansfield, Ct. 1977.

2. Differentiated Teaching Strategies

The second factor should be differentiating the teaching strategies used by teachers to deal with the higher mental processes possessed by such children and youth. For example, Dr. Frank Williams, a noted researcher in creativity and giftedness has developed a series of eighteen differentiated teaching strategies for use with gifted and creative elementary pupils. These strategies provide the teacher of the gifted with tools to deal with the higher levels of thinking (analysis, synthesis, evaluative) these children are capable of handling. The Connecticut State Department of Education has developed a slide presentation of the strategies and uses this presentation to train personnel on how to use such strategies in the classroom with the gifted and creative child. Many of the Connecticut school districts with programs for the gifted use the Williams strategies in their programs.

Differentiated curriculum designs and stressing special qualities such as originality, fluency of ideas, intellectual curiosity, independence of thought, conceptual elaboration, etc. require sequences of time for planning with instructional personnel to assure the articulation and coordination with the general curriculum designs.

Differentiated teaching strategies stressing the thinking and feeling processes of analysis, synthesis, and elaboration require time and training for the instructional staff who will work with these special youngsters. Utilizing the "low cognitive-regurgitive level" is one sure way of limiting a teacher's effectiveness with such children and youth.

Professional personnel, especially those involved in the instructional process and those who are designing, developing and implementing the differentiated curriculum designs and teaching strategies, know that the best instructional programs can be doomed to failure if they are not based on sound public understanding and support. Todays communities are actively involved in their schools, and they are increasingly sensitive to changes within them. Schools cannot move far from the ideas of the various publics without experiencing difficulties.

D. Informed Community

Any school district seeking to develop a sound program for the gifted and talented must be concerned with keeping the many interest groups of the community well informed. The first step toward effective community relations is a totally informed general staff committed to the special program for the gifted and talented. A divided professional staff can quickly destroy the best efforts of a planned program. Administration, through its instructional leaders should assume a major role in informing and working with staff and the many publics in the community. Those who assist in developing a program are usually its best supporters. Parents of the gifted and talented are actively interested in their children's individual needs. As a group, they can be counted on to give active support to a program, if they are well informed.

Counseling of parents of gifted and talented children and youth runs the route from individual to group counseling. If a program is to operate successfully, parent counseling is necessary. The degree of involvement will differ, depending on the complexity of the programs. The major task will, of course, occur during the first year of operation, when the identification process reveals that it will be necessary to communicate with a large group of parents. An effective informational group meeting, or series of meetings, should be held to establish the groundwork for the special program.

Parents should be informed about the broadening concept of giftedness, its implications, how they can assist their child and what the instructional program is all about. From that point on, counseling will be, more than likely, on an individual basis.

CONCLUSION

We have explored many aspects of programs for the gifted and talented and in conclusion we should summarize some of the major features of a program design:

1. Those involved in the total program should have a thorough knowledge of the broadened concept of giftedness.

2. Curriculum instructional and pupil personnel should play key roles in designing and developing programs.

3. An assessment of needs should be conducted in the school district to point up the priority needs of the gifted and talented.

4. The philosophy and objectives for pupils, staff and program should be clearly established.

5. Identification criteria for the specific target group(s) should be fully developed with the multiple criteria concept.

6. The administrative design to serve the pupils should be developed according to local needs.

7. A differentiated curriculum design articulated with differentiated teaching strategies for the gifted and talented should be designed and developed as the core of the program.

8. The differentiated program should be articulated and coordinated with total general education at all levels.

9. Public understanding should be nurtured among the many publics of the community.

10. Instructional and supportive personnel should be carefully selected.

11. A definitive plan for evaluation should be developed to assure that the goals for both pupil and program will be met.

12. Parents should play an integral role in all aspects of the program.

13. Community resources of both the human and physical nature should be fully utilized by those developing and implementing the program.

14. Funding sources from all public and private sectors should be explored.

Programming for the gifted and talented is an integral part of the total educational process. By their special nature, programs will vary from district to district. We should, however, consider each of the factors mentioned when designing, developing and implementing these special education programs for the gifted and talented.

DEVELOPING DEFENSIBLE PROGRAMS FOR THE GIFTED AND TALENTED*

Joseph S. Renzulli
Linda H. Smith

> What is (or should be) different about the types of learning experiences that are advocated for gifted students? Isn't what you are doing for the gifted also good for nearly all youngsters?

Unless satisfactory answers to these questions can be provided, programs that serve superior students will be extremely vulnerable to both critics of gifted education and to persons who, though sympathetic with this area, feel such special services are essentially a luxury item that schools can easily get by without. But more importantly, answers are necessary for those who experience pangs of conscience when they can defend programs for gifted youngsters philosophically, but not in terms of day-to-day experiences.

The purpose of this article therefore is threefold. First, some critical questions will be raised about a number of current practices that parade under the banner of special education for the gifted. Second, a rationale will be proposed for special programs that is based upon research studies dealing with the characteristics of gifted and creative persons. The third purpose will be to present a model that can be used as a guide by teachers and administrators in the development of truly defensible programs in this area of special education.

Far too many programs for the gifted are essentially collections of fun-and-games activities. Children walk into a resource room for the gifted, play a game or engage in craft-type activities until their class period is over, and return the next day to pursue some similar type of experience. In questioning teachers about the purpose or objectives of such activities, the reply is almost always that they are "challenging;"and "really enjoyable" to the children.

Although gifted students should have an opportunity to participate in a variety of such exploratory experiences and activities, an important part of all programs for the gifted should be the systematic development of the cognitive and affective processes which brought these youngsters to our attention in the first place. Systematic development simply means that professional educators should know and be able to defend the types of processes that are being developed through the activities that gifted children pursue in special programs. While freedom of choice in topic and learning style are important, it is the teacher's responsibility to assist a youngster in developing the skills of inquiry that will make him or her a "first-hand inquirer" in the particular area in which he or she chooses to work.

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*This article is a summary by the authors of The Enrichment Triad Model: A Guide for Developing Defensible Programs for the Gifted and Talented. Mansfield, Ct: Creative Learning Press, 1977.
This article also appeared in the Journal of Creative Behavior, Vol. 12, Number 1, First Quarter 1978.

When gifted youngsters do undertake individual research projects, there is frequently little difference between regular and special programs in the level or quality of inquiry. References consist of the same encyclopedias or library books used in the regular school program. The focus is frequently on the acquisition of knowledge or facts; where differences do exist, it is almost always in terms of freedom of choice, lack of pressure, and the absence of grading. Practices that are limited to this degree of differentiation have raised serious questions about the appropriateness of special programs for the gifted and talented.

Another general area of concern has been a preoccupation with mental processes and an almost complete absence of interest in the structure, methodology, and content of the organized fields of knowledge. In emphasizing mental processes via Bloom's Taxonony and Guilford's Structure-of-the-Intellect model, our energies may have been put in the wrong place. While we have attempted to design curriculum that will develop the higher mental processes, it is open for question whether the valid psychological concept of mental process has been a useful educational concept so far as curriculum planning is concerned.

This is not to say that we are against process objectives or that these psychological phenomena do not exist and cannot be developed through programming. But it is more than likely that they are things that "just happen" in good learning situations, and the harder we try to force processes into a behavioral objectives type of format, the more artificial and structured the curriculum will become. Our preoccupation with process objectives has in fact caused us to forget that process is the path rather than the goal of learning.

If many of the practices currently employed in special programs are not easily defended, what are the types of educational activities that will satisfy the criteria of qualitative differentiation? The answer to this question involves a variety of considerations, perhaps the most important of which is the definition of giftedness itself. How one defines giftedness is crucial to the ways in which one goes about making provisions for persons in this category of exceptionality.

Research on gifted and creative persons in the adult world has shown that although no single criterion can be used to determine giftedness, persons who have achieved reputations of eminence possess a relatively well-defined cluster of three basic traits. The first of these traits is generally acknowledged to be an above average, though not necessarily exceptional, level of intelligence. In a review of several research studies dealing with the relationship between academic aptitude tests and professional achievement, Wallach (1976) has concluded that:

> Above intermediate score levels, academic skills assessments are found to show so little criterion validity as to be questionable bases on which to make consequential decisions about students' futures. What the academic tests do predict are the results a person will obtain on other tests of the same kind.

An implication of this conclusion is that entrance into special programs should not be limited only to those students who score in the upper ranges on traditional measures of aptitude. If we accept this conclusion, however, the question is immediately raised--What other criteria should be used for identifying gifted students?

A second and perhaps more influential trait of eminent persons is a high level of task commitment or intrinsic motivation to perform in a particular area. Several studies have shown that accomplished scientists, writers, mathematicians, and architects are far more task-oriented and involved in their work than are people in the general population (Roe, 1952; McCurdy, 1969; MacKinnon, 1964; and Helson, 1971). As Roe (1952) suggested in her findings on task commitment:

> The one thing that all of these scientists have in common is their driving absorption in their work. They have worked long hours for many years, frequently with no vacations to speak of, because they would rather be doing their work than anything else.

The third trait that characterizes gifted persons consists of abilities commonly grouped together under the heading of "creativity." Eminence in the adult world is usually regarded as prima-facie evidence that an individual possesses creative ability. In fact, the terms "gifted," "genius," and "eminent" are often used synonymously with the word "creative" when describing persons who have made significant contributions; it is usually the originality, novelty, or uniqueness of a person's contribution that brings him or her to the attention of the public.

The study of eminent persons suggests that an interaction exists among the three basic traits that have been discussed- above average ability, task commitment, and creativity- and it is this interaction rather than any single trait or additive factor that results in superior performance. But in order for these traits to interact and manifest themselves they must have some type of problem with which to deal or a certain arena in which to perform. Thus, any definition of giftedness or formula for eminence in the adult world must take into consideration both the cluster of traits and a particular problem area to which these traits can be applied.

The Enrichment Triad Model represents an attempt to integrate the findings on the characteristics of eminent persons into an overall design for programming for gifted and talented students. As depicted in Figure 1, the Model consists of three interrelated types of enrichment activities. The first two types, General Exploratory Activities and Group Training Activities, are considered to be appropriate for all learners; however, they are also important in the overall enrichment of gifted and talented for at least two reasons. First, they deal with strategies for expanding student interests and developing thinking and feeling processes. Second, and perhaps more importantly, these two types of enrichment represent logical input and support systems for Type III Enrichment, which is considered to be the only type that is appropriate mainly for gifted students. Type III Enrichment, entitled Individual and Small Group Investigations of Real Problems, is the major focus of this model. As suggested in Figure I, approximately one-half of the time that gifted students spend in enrichment activities should be devoted to these types of experiences.

Type I Enrichment consists of those experiences and activities that are designed to bring the learner into touch with the kinds of topics or areas of study in which he or she may have a sincere interest. These experiences should enable youngsters to begin to make their own decisions about the topics that they might like to explore at greater depths and higher levels of involvement. Thus, one of the major objectives of Type 1 Enrichment is to give both students and teachers some hints about what might be a bona fide Type III Enrichment activity. A second objective of Type I Enrichment situations is to assist teachers in making decisions about the kinds of Type II Enrichment activities that should be selected for particular groups of students.

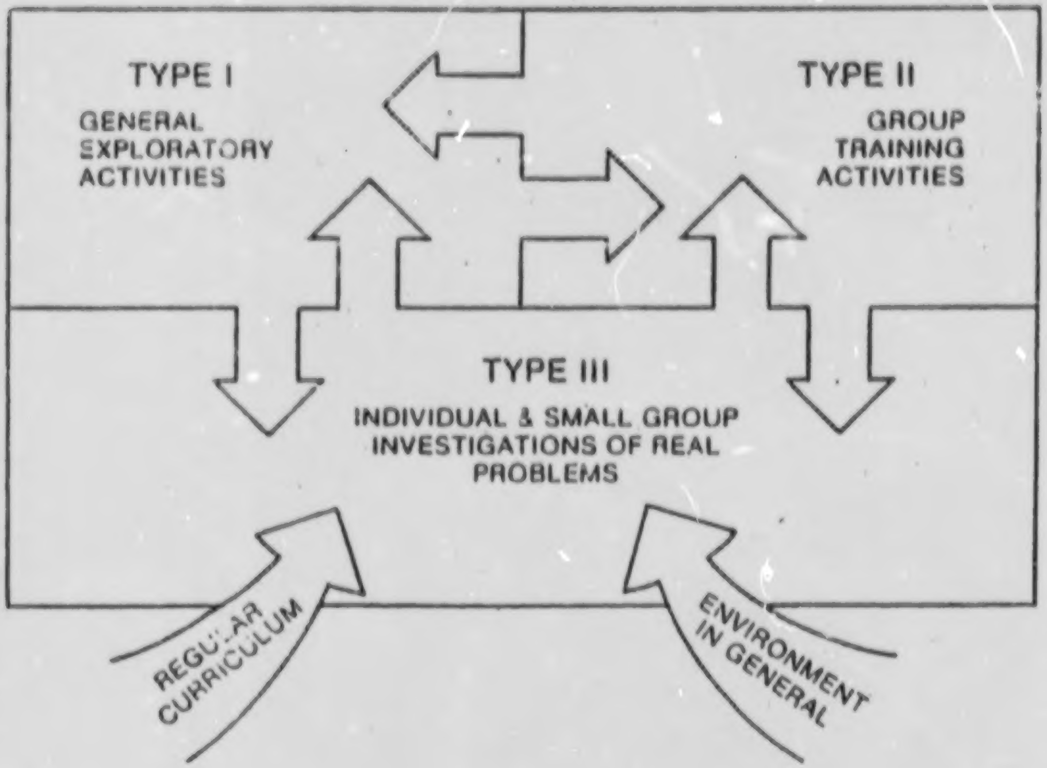
At least two general guidelines are suggested to help achieve the objectives of Type I Enrichment. First, although a great deal of exploratory freedom must be permitted, students should be made aware that they are expected to pursue exploration activities purposefully, and that after a given period of time has elapsed, each youngster will be responsible for analyzing his or her own experiences and coming up with some alternative suggestions for further study.

The second guideline deals with strategies for developing categorical interest centers in the classroom or resource room. These centers should be stocked with materials that are broadly representative of selected themes or fields of knowledge. The selection of appropriate materials for the interest centers is especially crucial because the objective here is not simply informational, but rather to provoke curiosity about the dynamic nature of a field and an interest in doing further research. Thus, it is essential that the materials in each center include descriptive information about particular fields of knowledge rather than mere collections of the accumulated information in a given field.

Type II Enrichment consists of methods, materials, and instructional techniques that are mainly concerned with the development of thinking and feeling processes. Over the years a variety of terms have been used to describe these operations or "powers of the mind." These terms have included critical thinking, problem solving, reflective thinking, inquiry training, divergent thinking, sensitivity training, awareness development, and creative or productive thinking.

Type II Enrichment activities are an important part of a total enrichment model for the gifted and talented for several reasons. First, such activities, if appropriately selected, provide for a range of response options (i.e., they must be open-ended) so that youngsters with superior potential will have an opportunity to escalate their thinking and feeling processes to whatever levels their own natural abilities allow. Giftedness and creativity are in the student's response (not the stimulus materials), and it is what the youngster brings to the learning situation that makes him or her gifted.

FIGURE 1 The enrichment triad model.


TYPE I
GENERAL EXPLORATORY ACTIVITIES
TYPE II
GROUP TRAINING ACTIVITIES
TYPE III
INDIVIDUAL & SMALL GROUP INVESTIGATIONS OF REAL PROBLEMS
REGULAR CURRICULUM
ENVIRONMENT IN GENERAL

Second, Type II Enrichment activities also have the potential for introducing youngsters to more advanced kinds of studies. For example, a student who becomes excited about advertising as a result of doing a creativity training exercise entitled "Let's Write a Slogan" might go on to do very sophisticated work in this area. Thus an interrelationship can be seen between Type II and Type III sections of the model and it is this connection (rather than the creativity training activity per se) that accounts for a truly enriching experience.

Finally, group training activities provide students with the skills and abilities necessary to solve problems in a variety of areas. Since gifted students are characterized by both a wide range of interests and an investigative attitude, systematic experiences in the thinking and feeling processes are necessary tools for more advanced types of inquiry.

By way of summary, Type II experiences should be carefully selected so that they represent a logical outgrowth of student interests and concerns rather than mere random involvement in whatever happens to be available or whatever the teacher might have a fancy for. Purposefully selected activities can help "tie together" the other two components of the enrichment model but more importantly, by viewing Type II Enrichment as one aspect of a total enrichment model, we can help to avoid the danger of making process-oriented activities the be-all and end-all of a program for the gifted.

Type III Enrichment consists of activities in which the youngster becomes an actual investigator of a real problem or topic by using appropriate methods of inquiry. In order for a student to become an investigator the focus of his or her efforts must shift from consumer-oriented productivity to real-problem-oriented productivity. A very subtle but important distinction exists between these two types of involvement. The student-as-consumer may engage in projects or claim to be "doing research," but such activity frequently consists of writing ritualized reports about conclusions which have been reported by other people. Nowhere in this process does the student use information as raw data.

Real-problem productivity, on the other hand, focuses on the identification and delimitation of problems that are similar in nature to those pursued by authentic researchers or artists in particular fields. Thus, activities that are considered to be bona fide Type III Enrichment experiences should reflect the student's emulation of the professional investigator to such a degree that the student actually becomes a professional himself or herself.

The success of a Type III Enrichment activity is in large part dependent on the degree of task commitment or motivation that the student brings to the investigation. Task commitment is a function of the realness or sincerity of students' interests, and thus, the first major responsibility of the teacher in carrying out Type III activities is to assist students in analyzing their own interests. Several issues should be considered in the identification of student interests. First, many youngsters will have already developed intense interests and commitments to particular topics or areas of study. In such cases our major responsibility is to help them focus their interests and to translate these interests into solvable problems. In addition, several student interests will undoubtedly result from General Exploratory Activities (Type I), Group Training Activities (Type II), the regular curriculum, and the environment in general. These existing or newly developed interests are "naturals" for Type III Enrichment experiences and should be capitalized upon whenever possible.

One way of obtaining some useful leads for exposing students to relatively new areas of potential involvement is through a community survey that seeks information about both the vocational and avocational interests of parents. Such a survey can also identify persons who might be willing to follow up an exposure activity (i.e., lecture, slide presentation, or visit to their laboratory, studio, or office) with some intensive involvement with individuals or small groups of students. Youngsters can also be helped to examine their present or potential interests through the use of interest inventories.

The second responsibility of teachers in developing Type III Enrichment experiences consists of providing students with the tools of inquiry appropriate for the fields of investigation being pursued. In order to do this educators should learn how to teach some general exercises in inquiry training. It is important to keep in mind, however, that exercises in inquiry training are only helpful up to a point. Like "discovery learning," they are highly controlled and can quickly become ends in and of themselves.

General instruction should also be provided in advanced library skills. Teachers should familiarize themselves with the existence, nature, and function of the full range of reference materials that are available for in-depth study in most fields. These materials include such items as indexes, directories, periodicals, source books, dictionaries, specialized encyclopedias, and abstracts.

Perhaps the most important thing that must be learned in order to promote Type III Enrichment is how to identify and locate How-To-Do-It resources. Almost every field of study has such guides and some are written at relatively elementary levels. It is important to analyze all resources in terms of an individual youngster's reading and conceptual level and to serve as a translator whenever a particular concept is beyond the child's level of comprehension. If the teacher cannot serve as a translator, the assistance of a person with specialized training should be sought.

The third and final responsibility of the teacher is concerned with helping students to communicate the results of their investigative work in a realistic and meaningful manner. Creative and productive persons are highly product-oriented and rarely engage in creative work without an audience in mind. Indeed, one of the major characteristics of a real problem (as opposed to a training exercise or presented problem) is that the producer is attempting to inform, to entertain, or to influence a relatively specific but nevertheless real audience.

Developing relatively realistic outlets for student products will require persons involved in the education of the gifted to exercise their own creativity. Assistance in this effort can be sought from creative/productive professionals and with persons from various interest groups. Local organizations, such as historical societies, science clubs, and dramatic groups might be explored as potential audiences, as should children's magazines that routinely include the work of young people.

Identifying appropriate outlets and audiences for student products is a very important part of the management function of teachers. Unless the time is taken to perform this role in an energetic manner, there is little likelihood that Type III Enrichment will achieve a truly qualitative difference from the usual project activities that are popular in most programs.

The extent to which all students can pursue knowledge as a first-hand inquirer or turned-on professional is not yet known. As far as gifted students are concerned, however, the history of human achievement (and indeed, the history of many programs for the gifted) is filled with examples of bright young people who not only emulated the methods of professionals, but who were in fact professionals themselves. Gifted children can unquestionably function in the manner of true inquirers, and for this reason it is recommended that investigations of real problems be the mainstay of programs for the gifted and talented.

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Introduction

IDENTIFICATION OF THE GIFTED AND TALENTED

One of the foremost concerns in programming for the gifted and talented is identification. This process actually serves two purposes. It enables a Planning and Placement Team to determine which students possess exceptional abilities such that their needs are not met in the regular program. Further, it becomes prescriptive to the extent that the assessment process provides teachers with information used to individualize program planning.

No single identification scheme is without its shortcomings, nor is any one design appropriate for the identification of every type of gift or talent. What is needed is a variety of measures both objective and subjective, which will support and supplement one another.

Connecticut legislation and administrative guidelines are based on a broadened concept of giftedness, one which views traditional academic ability as only one criteria within a wide spectrum of intellectual aptitudes and abilities, including creativity and talent in the graphic or performing arts.

Evidence as to a pupil's extraordinary learning ability and/or outstanding talent in the creative arts must be satisfactory to the Secretary of the State Board of Education. The guidelines for the State of Connecticut are spelled out in Section 10-76 of the Connecticut General Statutes. These are included in Section VI of this publication.

The responsibility for the identification of eligible pupils rests with the superintendent of schools or an employee of the school district to whom he may delegate this responsibility. Such identification should be based on a study of all available evidence as to the pupil's ability and potential made by personnel qualified to administer and interpret appropriate standardized tests, judge demonstrated ability and potential, and recognize outstanding talent in the creative arts. These screening and identification procedures should include objective measures as well as subjective evaluations by the qualified professionals. These professionals are responsible for providing an integrated design which combines objective and subjective measures to cover such areas as:

1) Consistently very superior scores on a number of appropriate standardized tests

2) Judgment of teachers, pupil personnel specialists, administrators, and supervisors who are familiar with the demonstrated and/or potential abilities of the individual

3) Evidence of advanced skills, imaginative insight and intense interest and involvement

4) Judgments of specialized teacher (i.e., art and music), pupil personnel specialists and experts in the arts who are qualified to evaluate the pupil's demonstrated and/or potential talent

As noted, systematic assessment practices vary according to the definition of giftedness used. In every case, however, the procedures should be designed to avoid arbitrary cut-off points or limitations. The identification process should identify a small percentage of pupils with extraordinary ability and outstanding talent whose needs are such that they cannot be met in the regular school program.

Three completely different approaches to Identification are found in this next section. The Baldwin Identification Matrix is a means of organizing obtained information and using it effectively. A look at traditional and case studies approaches of Identification is presented in "Two Approaches to Identification of Gifted Students." A procedure for identifying creative talent among the Handicapped is found in the third contribution.

These materials are intended to present various aspects of Identification. The Connecticut State Publication "CONN-CEPT V - Task Force Report on Identification" is to be used as a resource book for this procedure.

ANOTHER PERSPECTIVE ON IDENTIFICATION
USING
THE BALDWIN IDENTIFICATION MATRIX

by

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When one attempts to discuss the topic of gifted education, the problem of identifying or designating those who are gifted invariably consumes much of the discussion. The narrow definition of giftedness, which was a direct result of the Terman studies of the early 20's and 30's, has now been expanded. The rationale for an expanded definition has evolved from research and experiences of individuals as well as organizations.

The expanded definition, as accepted by the Office of Health, Education and Welfare, refers to children who have demonstrated achievement and/or potential ability in the areas of general intellectual ability, specific academic aptitude, creative or productive thinking, leadership ability, visual and performing arts, and psychomotor ability.

General intellectual ability refers to IQ scores assessed by individual or group tests. Academic ability refers to excellence in math, science, and other content areas. Creative ability refers to excellence in the arts, music, and creative expression of all types. Psychosocial refers to adeptness at leadership skills, group awareness, analysis of behavioral cues from those around him/her, etc., while psychomotor skills or kinesthetic abilities refer to exceptional manipulative facility.

It can be assumed then, from the above recommendations, that the narrow definition of giftedness as academic excellence is no longer tenable. Therefore, it is important that we seek new instruments and techniques which will allow us to identify those students in categories referred to as creative, psychosocial, kinesthetic/psychomotor, as well as academic or general intelligence. Techniques for assessing these characteristics are being developed by many individuals.

Assuming that a school district accepts the rationale for an expanded definition, this district faces the dilemma of pulling together all of these scores into a workable, practical, non-discriminatory format, which will help the district to interpret the child's qualification for a specially designed program. The following design addresses itself to this dilemma and becomes the central focus of the discussion being presented to you. It is called the Baldwin Identification Matrix referred to as the BIM.

In using this approach, the first step for the user of this matrix is an acceptance of the traits included in the HEW definition of giftedness as constants. These constants are General Academic Ability, Creative Ability, Psychomotor Ability and Psychosocial Ability. The next step would be to select an array of techniques for establishing exceptional strengths in the particular area.

SEE FIGURE 1, Page 42

The vertical axis (see figure 1) of the matrix would include the selection of assessment techniques. The horizontal axis includes the scale 1-5, which represents a ranking of scores for each child, which is average or above in any or all of the areas listed in the definition. Upon completion of the matrix, the researcher totals the points made on all variables with 5 being the highest possible score which can be received on any one variable. The sum of the points received by each child on the horizontal axis equals the total score for the individual. The highest possible score equals the number of items on the vertical axis times five.

According to the plan for a community, children can be selected from the gross screening for particular program emphases, i.e., math, science, general abilities, creative development. The profile can also be used to establish an equitable cut-off point for acceptance into district-wide programs of some type.

Most assessment instruments use either percentile, IQ scores, stanines, or a "total number of points" format for reporting outcomes. Since we are looking for the individuals with exceptional abilities, the number I on the horizontal scale represents the median score. The median for the IQ score is 100. The range of scores for each weighting is calculated by subtracting the median score from the established upper limit. In the case of IQ scores the upper limit selected here is 140+ and by dividing by 4, you will get a point spread of 10. In the case of the percentile, the median point is the median for that population. In the case of the school referred to on the matrix, the school median was 75%ile. The upper point was 95%ile. The point spread in this case is 5(20÷4). With the stanines, the median point is 5, the upper limit is 9, and therefore, the point spread is 1 (4÷1). In the case of verbal assessment, it is necessary for qualities to be qualified as in Superior being rated as 5 and so on to average which is rated 1. The column B/NA is used to check if information is below average or not available.

The BIM has been designed and used successfully in the Minnesota school districts to pull together all of the assessment techniques into a profile which allows a child equal access to a specially designed program for children who exhibit exceptional ability in a wide range of areas. The use of the BIM format is unlimited. Some of the advantages of such a format are listed (next page).

1. It allows a school district to use available information for assessment of a child's capabilities.
2. It produces a total score which gives the child from a different culture an opportunity to compete for recognition in a specialized program. This advantage also applies to the child whose talents or giftedness lies in areas which have traditionally been excluded from recognition.
3. It allows the district to assess the strengths as well as the weaknesses of those children who are exceptionally gifted in the traditional areas of assessment.
4. It gives the district an opportunity to tailor the program to the abilities exhibited on the profile sheet. (A threshold program which helps children to develop the areas of weaknesses before entering the arena of high competition in this area.)
5. It provides a starting point for curriculum development and an organizational structure for meeting the needs of the identified children.
6. It surfaces the underachiever.

In conclusion, the BIM format is being suggested as a way to more equitably assign students to gifted programs. It does not suggest nor recommend that standardized instruments such as IQ tests and achievement tests be ignored in the use of this format. Rather, it suggests that additional instruments, which expand the data base and establish the acceptance of a broad range of abilities, be added.

The Baldwin Identification Matrix Training Kit for Identifying Gifted and Talented Students is available from:

D.O.K. Publishers
71 Radcliffe Road
Buffalo, New York 14214

Kit Price: $6.95

Kit includes a leader's guide and sufficient material for conducting the simulation with 10 - 45 participants.

Pad of 30 BIM forms available separately for: $1.00

Pad of 30 Student Data Forms available separately for: $1.00

FIGURE 1

BALDWIN IDENTIFICATION MATRIX (BIM)
Adapted for use by:

SAMPLE

Student Joseph Matrix School: Loman Elementary

Age 9 Grade 3 Sex M Date 5/6/77 School District: Eastern

Assessment Items	Scores 5	 4	 3	 2	 1	 B/NA
1. Standardized Intelligence Test	140+ ( )	130-139 ( )	120-129 (✓)	110-119 (	100-109 ( )	
2. Achievement Test Composite Score	95%ile ( )	90-94%ile ( )	85-89%ile (✓)	80-84%ile ( )	75-79%ile ( )	
3. Achievement Test Reading Score	Stan 9 (✓)	Stan 8 ( )	Stan 7 ( )	Stan 6 ( )	Stan 5 ( )	
4. Achievement Test Math Score	95%ile ( )	90-94%ile ( )	85-89%ile (✓)	80-84%ile ( )	75-79%ile ( )	
5. Learning Scale Score	32 (✓)	28-31 ( )	24-27 ( )	20-23 ( )	16-19 ( )	
6. Motivational Scale Score	36 (✓)	32-35 ( )	28-31 ( )	24-27 ( )	18-23 ( )	
7. Creativity Scale Score	20 (✓)	36-39 (✓)	32-35 ( )	23-31 ( )	20-27 ( )	
8. Leadership Scale Score	40 ( ) Superior	36-39 ( )	32-35 ( )	28-31 ( )	20-27 ( ) Average	
9. Various Teacher Recommendations	( )	(✓)	( )	( )	( )	
10. Psychomotor Ability	( )	(✓)	( )	( )	( )	
11. Peer Nominations	( )	(✓)	( )	( )	( )	
12.	( )	( )	( )	( )	( )	

Column Tally of Checks	4	4	3	0	0
Weight	x 5	x 4	x 3	x 2	x 1
Add Across	20 +	16 +	9 +	0 +	0
Total Score	45				

1977

TWO APPROACHES TO IDENTIFICATION OF GIFTED STUDENTS

Joseph S. Renzulli
Linda H. Smith

One of the continuing concerns in programming for gifted students is the efficiency and effectiveness of various methods that are used in the identification process. Until recently, giftedness was viewed almost entirely in terms of high measured intelligence. Thus, comparative studies of identification procedures have traditionally used individual intelligence tests as the ultimate criterion measure for judging the efficiency and effectiveness of alternative approaches to identification (Pegnato and Birch, 1959; Martinson and Lessinger, 1960; Baldwin, 1962: Blosser, 1963). In recent years, however, giftedness has come to be viewed as a concept that is much broader than solely high intelligence (Renzulli, 1973; Gallagher, 1975; Sato, 1974). Consequently, a wider variety of identification procedures have been developed.

In view of this broadened conception of giftedness, the use of individual intelligence tests as the ultimate criterion in comparative studies is a questionable practice because it is obviously biased against identification procedures that do not rely heavily on measures of intelligence. The purpose of this study, therefore, was to compare two general approaches to identification using an alternative criterion measure to judge efficiency and effectiveness. The study also investigated the cost of the two approaches and the usefulness of certain types of information that are used in identification.

DESCRIPTION OF IDENTIFICATION PROCEDURES

Data from seven school districts that were intitating programs for gifted students in grades one, three, and five were gathered and analyzed in order to obtain basic information relating to the development of appropriate methods and techniques for identifying academically gifted students. Three of these school districts, referred to as Districts 1, 2, and 3, used what will be known in this article as the traditional approach. Essentially, this method consisted of (a) administering group ability tests to all students in the grades from which program participants would be selected and (b) administering an individual intelligence test to all students whose score was above a certain level on the group test.

The remaining four districts participating in the study used case study approaches as the main means for identifying program participants. Three of the case study approaches were adopted from formats developed in Florida, California, and Illinois, while the fourth district used a format that was developed by project personnel. These districts will be referred to as Districts 4, 5, 6, and 7, respectively.

Credit to:
Exceptional Children Journal

Although the various case study approaches differ somewhat in the particular types of information and instruments that they include, most of the formats include data that can be classified into the following categories:

1. Information based on aptitude and/or achievement test scores.
2. Information based on ratings by present and/or past teachers.
3. Past performance information included in students' cummulative record folders.
4. Information based on parent ratings.
5. Information based on student self ratings.

The procedures for actually carrying out the case study approaches also tended to remain rather uniform from district to district. The required information on each child was gathered by professional and clerical personnel and then submitted to a selection committee for review and assessment.

COMPARISON OF EFFICIENCY

One of the major objectives of this study was to investigate the efficiency of various approaches to the identification of academically gifted students. Efficiency is defined as (a) the amount of time (in terms of professional and clerical staff hours) that was devoted to identification activity and (b) the cost in dollars for carrying out these activities. An additional dimension of efficiency is concerned with the usefulness of particular types of information that were gathered for purposes of making selection decisions.

Time and Cost Analysis

Copies of an instrument entitled the Log for Recording Preselection Activities were provided to all persons involved in the identification process. These persons were requested to record their time according to a predetermined classification system that consisted of such tasks or activities as reviewing student records and compiling information, individual testing, group testing, and completing rating scales. Using salary and fringe benefit information that was entered in the logs, all time entries were multiplied by adjusted hourly pay rates.

The time and cost information derived from this procedure is summarized in Table 1. Inspection of this table reveals some interesting comparisons between the traditional and case study approaches. Although the traditional approach is supposed to be relatively mechanical (i.e., preselection is based on a group test cutoff score followed by an individual intelligence test), the authors note that there were small differences between the two approaches with regard to the amount of project teacher's time devoted to identification activity. In addition, a relatively large amount of administrator's time was spent

TABLE 1

Summary of Time and Cost in Identifying Gifted Students by Means of Traditional and Case Study Approaches

Type of Approach	Project Teacher		Administrators		Secretaries		Teachers		State Psychologist		Total	
	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost
Traditional												
District 1	104.75	817.05	16.50	208.89	-	-	12.75	107.01	171.00	1710.00	305.00	2842.95
District 2	139.00	1615.18	16.00	201.44	-	-	72.05	584.65	132.00	320.00	359.00	3721.27
District 3	47.50	480.70	250.50	2677.34	26.00	49.40	5.00	37.45	126.00	1250.00	455.00	4504.39
Mean[a]	97.08	970.78	94.33	1029.22	8.67	16.47	29.93	243.04	143.00	1430.00	373.00	3689.70
Case Studies												
District 4	109.50	1158.51	-	-	7.00	27.79	23.00	200.24	-	-	139.50	1386.54
District 5	66.00	620.40	4.25	50.31	-	-	35.75	319.29	-	-	106.00	990.00
District 6	53.25	626.75	16.25	224.40	35.00	160.53	47.25	406.36	-	-	151.75	1418.05
District 7	197.00	a	482.75	a	66.50	a	148.50	a	-	-	894.75	a
Mean[b]	106.44	801.89	125.81	91.37	27.13	62.77	63.63	308.63	-	-	323.00	1264.85

[a] Could not be calculated because information on salaries and overhead costs was not submitted

[b] Mean costs are calculated on the basis of three districts.

in identification related activity in the districts using the traditional approach. As might be expected, time devoted to identification by regular classroom teachers and secretaries was significantly higher in most of the districts using the case study approach.

The total number of hours devoted to identification in the districts employing the traditional approach ranged from 305 hours to 455 hours; the mean for the three districts was 373 hours. A proportionate range was found when these figures were converted to dollar amounts. In the four districts using the case study approach, it can be seen that with the exception of District 7, there was also a fair amount of consistency in the number of hours expended on identification activities. The range in total hours was between 106 (District 5) and 151.75 (District 6), with costs being proportionate to the differences in hours.

As far as District 7 was concerned, the disproportionate amount of time devoted to identification activity was generally accounted for by the large number of hours recorded by school administrators. These individuals were responsible for developing a case study format prior to actually engaging in the screening and selection process. This developmental activity, in addition to the involvement of a second school building (and therefore double administrator time in such activities as staff meetings, etc.), may explain why such a large amount of time was required for identification activity in District 7.

In an attempt to evaluate the efficiency of alternative approaches to identification, time and cost figures were analyzed in relation to the ration between the total number of students who had been screened and selected. The word screened is used here to describe any youngsters for whom data had been gathered, regardless of whether or not that youngster was ultimately selected for the program. Table 2 presents a breakdown of the number of students screened, the number of students selected, the ration between these two figures, and the cost and hours spent per selected student. Inspection of this table shows that the mean ration of screened to selected students was slightly lower for those districts using the traditional approach. The significance of this difference is minimized however, when considering the relative cost of screening students using the traditional versus case study approach. Whereas the mean cost per screened student in the traditional districts was $16.64, the average cost for the case study districts in which information on salaries was submitted was only $5.23.

Usefulness of Case Study Information

In an attempt to investigate the usefulness of various types of information that constitute the four case study formats, all selection committee members were asked to indicate the value of each type of data in making his or her individual decisions in selecting students for program participation. Following this rating, each committee member was asked to estimate the value or usefulness of each type of information in influencing the group decision making process (i.e., the decision of the selection committee as a whole).

TABLE 2

Summary of Number of Students Screened and Selected as Gifted by Means of Traditional and Case Study Approaches

Type of Approach	No. of students screened	No. of students selected	Ratio of screened to selected	Cost per selected student (in dollars)	Hours spent per selected student
Traditional					
District 1	225	31	7.26.1	91.70	9.84
District 2	220	24	9.17.1	155.05	14.96
District 3	221	40	5.53.1	112.62	11.38
Mean	222	31 67	7.32.1	119.79	12.06
Case Studies					
District 4	217	25	8.68.1	55.46	5.58
District 5	308	28	11.00.1	35.36	3.79
District 6	233	45	5.18.1	31.51	3.37
District 7	267	51	12.29.1	a	17.54
Mean[b]	256.25	37.25	9.29.1	40.78	7.67

[a] Could not be calculated because information on salaries and overhead costs was not submitted.

[b] Mean costs are calculated on the basis of three district.

In three of the four case study districts, scores on some type of intelligence or achievement tests were rated as one of the most highly useful types of information in making selection decisions. In the fourth district (District 7), intelligence test scores received the lowest usefulness rating and achievement tests received the second lowest rating. This major discrepancy between Dictrict 7 and the other three case study districts may have been due in part to the fact that District 7 served a large proportion of minority group youngsters, and it is generally acknowledged that intelligence and achievement tests are not as valid for this group as they are for the population in general.

One type of information that was judged to be highly useful by a large number of selection committee members was ratings supplied by students' current teachers and information included in students' cummulative records or obtained through interviews with previous teachers. Health and family background information was judged to be of little value in making selection decisions, as was information supplied by parents through the use of questionnaires or rating scales. Peer nomination information, which was gathered in District 7, received the highest usefulness rating by individuals and was also considered to be the most influential type of information in helping the total group to arrive at decisions.

COMPARISON OF EFFECTIVENESS

The second major area of inquiry in evaluating the identification process had to do with the effectiveness of the respective approaches. Effectiveness was concerned with whether or not the most appropriate selections were made in placing students into gifted programs. Since individually administered tests of intelligence constituted one of the identification approaches being evaluated, the criteria for effectiveness consisted of followup ratings by regular classroom teachers and project teachers. Ratings were based on the degree to which teachers thought students were appropriately placed.

The results of this inquiry are presented in Table 3. By comparing the proportions at the bottoms of the columns for the two groups of regular classroom teachers, the authors note that there was a fair amount of consistency in making judgments regarding placement. In both traditional and case study districts, regular classroom teachers estimated that approximately 85% of the youngsters "definitely should be in the program."

A somewhat different picture emerges when a comparison of the overall ratings by the project teachers in districts using the traditional selection approach is made with those by project teachers in districts using the case study approach. Here it is found that approximately 79% of the youngsters in traditional approach districts were judged as: "definitely should be in the program," whereas the figure for case study districts was 92% of the students. The difference between these percentages was found to be statistically significant, and thus a significantly greater amount of certainty about placement in the case study districts so far as the project teachers were concerned can be noted.

TABLE 3

Number and Percentage of Students Identified by Regular Classroom Teachers and Project Teachers as Qualified to be in Gifted Program

	Type of teacher			
	Regular Classroom		Project	
District	Number	Percentage	Number	Percentage
Traditional Districts				
District 1				
Grade 1	3	100	9	82
Grade 3	6	75	7	88
Grade 5	7	100	7	70
District 2				
Grade 1	5	83	5	83
Grade 3	6	88	6	100
Grade 5	5	100	2	22
District 3				
Grade 1	4	80	4	80
Grade 3	3	60	7	88
Grade 5	6	100	8	100
Total Number & Average percent	49	88.33	55	79.22
Case Study Districts				
District 4				
Grade 1	1	100	6	100
Grade 3	6	100	6	100
Grade 5	8	80	7	88
District 5				
Grade 1	6	100	6	100
Grade 3	6	86	6	100
Grade 5	1	100	1	100
District 6				
Grade 1	9	69	10	77
Grade 3	15	88	14	82
Grade 5	14	93	13	87
District 7				
Grade 1	15	88	17	100
Grade 3	9	75	13	81
Grade 5	7	56	16	94
Total Number & Average percent	101	86.42	115	92.42

DISCUSSION AND CONCLUSIONS

Several conclusions appear to be warranted as a result of the findings discussed in the preceding sections of this article. The first and perhaps most important general conclusion is that the identification process should be based on a variety of types of information that reflect several indicators of a youngster's superior performance or potential for superior performance in a program that is specifically designed to enhance academic ability.

This conclusion is based on two general trends that emerged from the data. First, the collection of a wide variety of information about a particular youngster does not seem to present any hardships as far as time and costs are concerned. Indeed, the case study approach costs approximately one-third as much as the traditional approach, which in its pure form requires only one type of information--intelligence test scores. However, persons who served on selection committees in the case study districts pointed out the need for some type of information that is based on standardized tests of intelligence or academic aptitude. Thus, it seems clear that certain features of both the traditional and case study approaches are optimally desirable in a comprehensive identification system.

Another conclusion related to the efficiency issue deals with the number of students that must be processed in order to make final selections. Although it has been suggested that the case study approach will result in an unmanageable number of nominees, such was not the case in the data obtained in this study. The ratio of students screened to those selected was only slightly higher in districts employing the case study approach, and thus, it seems safe to conclude that a case study approach is feasible as far as time and cost are concerned.

An additional finding that lends support to the case study approach is that it appears to be more sensitive to identifying academically able students in schools that serve minority group populations. A high level of effectiveness emerged in the followup ratings that were received from District 7, and this finding, coupled with extremely favorable comments regarding the identification of minority group children, suggests that a system based on diversified sources of information will help to take account of differences in youngsters' backgrounds in general. In other words, all types of differences in youngsters' backgrounds (e.g., racial, ethnic, socioeconomic, demographic) can be considered in a multi-informational approach, but such is not the case when identification rests solely on intelligence test scores. As greater efforts are made to expand the number of programs for gifted students, it will be important to have an identification system that is flexible enough to take account of population differences within states and within school districts that serve youngsters with a variety of backgrounds.

Relating to specific procedures for carrying out the identification process, an analysis of the value or usefulness of various types of information in making selection decisions suggests that the opinions of past and present teachers are an important consideration in identification. Peer nominations appeared to be a valuable source of information but, since this technique was used in only one case study district, its usefulness must be viewed as a tentative conclusion at this time. Finally, in view of the role that project teachers play in identification, it seems clear that some special arrangements must be made to allow these persons released time for identification activity.

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PROJECT SEARCH

IDENTIFICATION OF CREATIVE TALENT POTENTIAL AMONG THE HANDICAPPED

by

Elaine J. Talada

In the continuing educational thrust for special programs designed to meet the needs of gifted and talented youth, much has been written concerning the identification of exceptional abilities. While numerous methods exist for identifying intellectual ability, and several for assessing talent in the arts, little emphasis has been placed on identifying exceptional abilities of handicapped children.

Prompted by this deficiency in procedures for identifying developed or potential talent in handicapped children, Project SEARCH (SEARCH for Exceptional Abilities Reachable among Children with Handicaps) was initiated as a Title VI B, EHA, project of the Connecticut State Department of Education.

The primary objectives of Project SEARCH were to develop a systematic procedure for assessing the creative talent potential of handicapped children and to develop these identified talents through specific training activities. The target population included children possessing severe or low-incidence handicaps: hearing impaired, physically handicapped, emotionally disturbed, and multiply handicapped. This population was drawn from two of Connecticut's regional education centers: Area Cooperative Educational Services (ACES), and Capitol Region Education Council (CREC).

The identification procedure which was developed combined an adapted version of the Torrance Tests of Creative Thinking and assessment of students by practicing professional artists in the areas of visual arts, theatre-movement, and music.

The Adapted Torrance Tests:

Figural Form B of the Torrance Tests of Creative Thinking was adapted for use with variously handicapped children. As compared to the original Torrance Tests, specific adaptations included: 1) the use of larger stimuli, particularly for physically handicapped students with poor motor skills, 2) fewer stimuli per page for easily distracted students and 3) simplified instructions, primarily to accommodate hearing impaired children. Activity I of the original Torrance Tests (Figural Form B) was omitted. In its place, alternate warm-up activities were administered.

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The resulting inventory consisted of two activities.

Activity A - Picture Completion - The child adds lines to incomplete figures to make interesting objects or pictures.

Activity B - Circles - The child makes objects or pictures using circles as the main part of the picture, by adding lines.

Three formats were developed for each activity, containing figures of various sizes. For Activity A the formats were: one figure per page, two figures per page, and four figures per page. For Activity B, the formats were: four circles per page, six circles per page, and twelve circles per page. Each test was left unbound, with individual pages presented to each child, one at a time, as needed. This was to keep children from being distracted, or from feeling overwhelmed when presented with more than one page of stimuli.

Test Administration:

In order to elicit maximum creative performance from each student, warm-up activities were used prior to the actual test administration. These activities helped to initiate the flow of students' creative energies and familiarized them with both the test administrators and the types of test activities. Warm-up activities were conducted with groups of three to twelve students and elicited responses to the following: 1) possible uses for a paper cup, 2) possible ways to move a paper cup from a table to the floor, and 3) possible ways to move from one part of the room to another. Warm-up activities which could be demonstrated physically were used for hearing impaired and language impaired students.

Following the group warm-up activities, students were separated and were given the test directions, both verbally and in writing. Students were allowed ten minutes per test activity, with the exception of the physically handicapped. Many of these students had such poor muscle control that it became necessary to allow five to ten minutes per activity. For the purpose of interpretation, examiners made note of the total number of responses completed in ten minutes. As a student completed a stimulus page, he was provided with the next page.

Test Interpretation:

All tests were scored using the Torrance Test Manual. Raw scores were converted into T scores for each area measured: fluency, flexibility, originality, and elaboration.

In rare situations in which students were unable to take the Figural Form of the Adapted Torrance Tests, but were able to communicate verbally, activities 5 and 7 of Verbal Form A were administered. Each activity was administered individually with the examiner recording student responses. As with the Figural Form, scoring and interpretation followed the method prescribed in the Torrance Test Manual.

Arts Assessment:

The second dimension of the identification of creative talent potential involved arts activities in three general areas: visual arts, theatre-movement, and music. The activities and materials were designed, constructed, modified and revised by Project SEARCH artists. Most of the artists were staff members of the Educational Center for the Arts (ECA) in New Haven, and were selected for their experience in the assessment of creative potential. For each general area materials, objectives, activities, and general procedures were established. Each artist refined, adapted, and/or expanded the procedures and materials to suit his or her skills and personality, and the individual student's age, interest, functioning level and attention span.

Visual Arts:

Three sets of manipulatives were created by visual artists to assess creative potential in handicapped children.

A. Wooden cube-like rectangular solids were designed, intentionally irregular in size. This irregularity was introduced to purposely create problems for students who attempted to use the cubes in a conventional manner. Each solid was painted on the diagonal of up to three faces, with any of a variety of colors, thus incorporating color and surface design with three dimensionality.

B. Cylinders cut from 1½" diameter dowels were created with one surface cut on the diagonal at varying angles. This irregularity was introduced to create difficulty in stacking the cylinders. Again, diagonal surfaces were painted any of a variety of colors.

C. Quarter round sections were made by cutting wooden discs of approximately 3" radius by 1" thick, with slight variations in the dimensions to introduce irregularity. The discs were then cut into 4 quarter-sections, some of which were painted on one-half of the surface while others were left blank. For student use, different sized sections were mixed.

All materials were of a thickness and size that could be easily manipulated by physically handicapped students. Fabric covered boards were provided to reduce unintentional slippage of materials.

Visual Arts Assessment:

Each child was seated comfortably and was given a variety of the above materials. Each was instructed to make anything he or she wanted to make from the given materials. When a design or object was completed the child was asked to tell about the creation, to tell a story about it, or to describe it. Those students who possessed language handicaps were given assistance by the artist. Students were urged to make more than one construction.

Interpretation:

During the construction time the artist observed student involvement, interest, curiosity, excitement, or boredom. Judgments were based on both this observation of "play" and on the general use of the materials. Four elements of creativity were assessed: fluency, flexibility, originality, and elaboration.

Fluency and flexibility were assessed by noting the number and types of constructions made.

Originality was assessed for the properties of concept and design. Originality of concept was assessed by noting the uniqueness of the construction and the uniqueness of the title or description. (See figure 1). In originality of design, consideration was made for the combination of color and dimension.

Elaboration was assessed by considering the verbal responses regarding the creations and by the number of properties (color and design) in each construction.

Theatre-Movement Assessment:

Six important skills in theatre-movement were defined as objectives of the assessment procedures. The description below is a summary of the general procedures and materials used by Project SEARCH artists to assess creative potential in theatre-movement.

Objective 1 - Body Awareness
Task Isolation of Body Parts

Students were instructed to "Show how many ways you can move your head." The artists encouraged the activity and guided new ways. This was repeated with shoulders, hips, arms, and legs. The procedure was shortened or modified to accommodate each child's functioning level (e.g. a physically handicapped child could respond by moving tongue, fingers, etc.)

Objective 2 - Locomotor Variation
Task Moving Across the Room in Different Ways

For evaluation of Objective 2, students were asked, "Can you think of a way to get across the room that no one else would think of?" Cues to shift methods or to follow a suggestion of a student were provided by the artist.

Objective 3 - Response to Rhythm
Task Reactions to a Tape of Rhythms

Students were asked to move with the taped music and to "freeze" instantly when there was a silence. They were also asked to think of different ways to keep rhythm with their bodies. For hearing impaired children, a drum accompanied the tape to increase conduction and reception by vibrations.

Objective 4 - Ability to Improvise
Task Using a Hula Hoop and/or a Scarf to Represent Different Objects or Activities.

Students were asked to pretend the hoop was something other than a hoop and use it as that object, or they were to demonstrate as many things as they could do with a scarf.

Objective 5 - Involvement in Improvisation
Task Response to a Problem or Situation

Students were asked to respond to a problem or situation statement. Situations included wearing 100 lb. shoes, walking on sticky floors, walking in the wind, or being in a jar (the hoop).

Objective 6 - Creative Storytelling
Task Response to a Picture

Students were presented with a picture and were asked a variety of questions to help analyze the picture. (i.e. "What are they doing?," "Who are they?") and to expand upon it ("What will happen next?," "How do they feel?") Time was allowed for students to act out their stories.

Interpretation:

Activities were evaluated on the number and variety of responses (fluency and flexibility), the originality of the responses, and on the elaboration of responses. Artists focused on the responses by asking three key questions. 1) Does the child think in an original manner, above the level of any child his or her age? 2) Is this manner exceptional when taking into consideration the child's handicap? (Some handicapped children have to rely on pantomime to communicate so it might be expected for them to excel in this area). 3) Can the child pick up on a verbal cue and elaborate on it?

Music Assessment:

The activities designed to assess creative potential in music were divided into two distinct categories: skill activities and creative activities. Materials used included such instruments as blocks, drums, triangles, and a piano, if available. A tape recorder was used to tape each session for subsequent analysis by the examining artist.

Students were evaluated in small groups or individually, with activities selected and adapted for specific children (e.g. emotionally disturbed or learning disabled students who experience difficulty with unstructured activities might not participate in activities of that type).

Skill Assessment Activities:

1. Repetition of heard rhythmic patterns
   Example - Artist clapped a short rhythm and asked the students to repeat it. Rhythms were made increasingly complex.

2. Musical conversation with the artist
   Example - Student invented "answers" to rhythmic "questions."

3. Melodic repetition
   Example - Artist sang a simple melody and asked students to repeat it. Melodies became increasingly complex.

4. Singing of familiar songs with accompaniment

5. Vocal or instrumental performance by experienced students with emphasis on high/low pitches and loud/soft sounds
   Example - Artist talked with students about any musical experience. (Singing, playing instruments; listening to records, radio, or television; family singing, and church or synagogue experiences involving music). If a student had a demonstrated skill in a particular area he was encouraged to show it. The artist then used this skill in focusing on the following activity. Students were asked to produce a high sound then a low sound, first with the voice, and then with objects in the room. Students were asked to produce short sounds and long sounds in the same way.

Creative Assessment Activities:

1. Finding all of the possible sounds from one object.
   Example - Students were given a common object which produces sound (a newspaper, construction paper, etc.) and were asked to find as many sounds as possible.

2. Finding sounds in the room
   Example - The students were asked to explore the space for sound producing objects. They were then asked to choose their favorite objects and to bring them together in one area.

3. "Making" a musical piece using #1 and #2

4. "Making" a song

5. Playing (on piano if available) a sad song, city sounds, angry sounds, bird sounds, etc.

Interpretation:

The music skill activities were designed to quickly guage auditory reception, discrimination, memory, perception of pitch and the level of musical training or proficiency.

The creative activities yielded information on fluency and flexibility with materials and musical patterns, originality of the music produced, ability to locate sounds, and elaboration on a central theme.

The tapes of the sessions were analyzed to give a rating on all of the activities summed for each element of creativity and a total student rating for music. It should be noted that a subjective element existed here. It diminished, however with several observations. The number of sounds could be noted (fluency), as well as the different categories of sounds (flexibility). With experience, apparent originality of sounds could be noted. (While some students gathered only observable sounds, others searched out highly unusual ones.) Elaboration was observed by noting students who worked with one object and produced many different sounds from it.

Identification:

The final identification of creative talent potential among handicapped students was accomplished by combining the results from the various assessment procedures. The use of multiple criteria was deemed essential in order to gain more information on the various facets of talent potential than any single instrument could provide.

In terms of the Adapted Torrance Test activities, exceptional creative talent potential was operationally defined by a score on any of the four measured dimensions (fluency, flexibility, originality, and elaboration) which fell at or above the 97th percentile, or a minimum T score of 69. This cut off was selected because it corresponds roughly to a commonly accepted criterion for giftedness, which is two standard deviations above the mean. Students who received such scores on the Torrance activities were rated "highly recommended." It is important to note that students were held rigorously to the norms found in the Torrance Technical Manual, despite the fact that the Torrance population sample included no handicapped students.

Two interesting observations were made concerning student performance on the Adapted Torrance Tests. First, T scores of the handicapped population formed a curve approximating a normal distribution on all dimensions except elaboration, which was slightly positively skewed. Second, somewhat more than three percent of the handicapped students received scores at or above the 97th percentile, using Torrance's national norms.

Whenever possible, students were assessed by at least two professional artists composing a multi-arts team in visual arts, music and/or theatre movement. In a few instances where a child could function in only one medium, assessment was limited, usually to visual arts.

In each art field, the student's creative potential was rated on a four point scale:

1 highly recommended
2 yes
3 maybe (ability, but not exceptional)
4 no

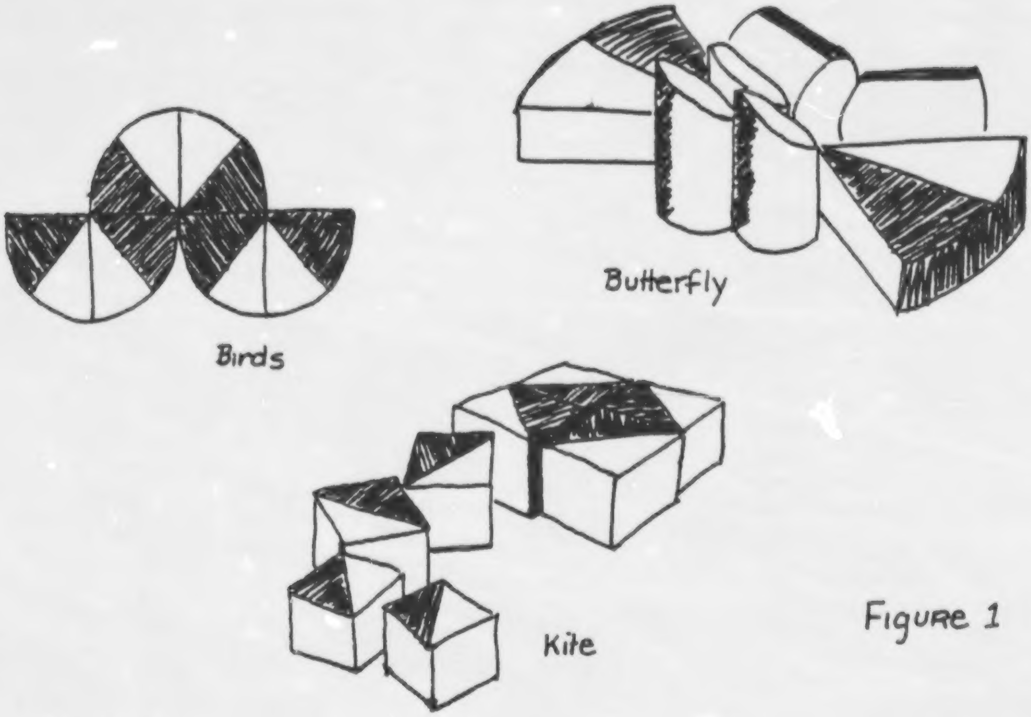
To be classified TALENTED by the Project SEARCH assessment procedures, a student was required to have scored HIGHLY RECOMMENDED on one assessment instrument (The Adapted Torrance Tests, Visual Arts, Music, Music, and/or Theatre-Movement) and at least YES on one other assessment. This meant that students who showed potential on at least two of the four assessment measures would be selected for services in Project SEARCH.

In a few very rare cases, it was possible to assess a student on only one measure, and the student was rated "highly recommended." Any student in this category was also classified TALENTED.

Decision of artists were made independent of each other, and of the Adapted Torrance Tests of Creative Thinking. Interestingly, however, the results of the identification process indicated that every child who scored at or above the 97th percentile on the Adapted Torrance Tests was also identified by at least one artist. In other words, no child identified by the Adapted Torrance Tests was not also identified by an artist. The reverse did not necessarily hold true. Consequently, no child was denied services because of a low Adapted Torrance score.

What emerged very clearly from the efforts of Project SEARCH was the remarkable potential of a number of handicapped children. While such creative abilities may be masked by the handicapping condition, full assessment should include a rigorous search for exceptional strengths as well as deficits. In some cases identification and subsequent training might well provide a viable career choice and the opportunity for fulfilling growth and self-realization among the handicapped.

A note of special thanks is due to Project SEARCH Director Alan White for his invaluable assistance with the research for this paper, and to Project SEARCH evaluator, Frederica Hoffmann for permission to adapt, summarize and quote from the Project SEARCH evaluation report.



Birds

Butterfly

Kite

Figure 1

INTRODUCTION TO EVALUATION FOR PROGRAMS OF GIFTED AND TALENTED

In this era of increasing demands for accountability in programs for Gifted and Talented, it must be demonstrated that quality education is being offered to those children and youth. Evaluation is an integral part of any successful gifted and talented program. It is one of the most difficult facets of good program development because of the very nature of the process.

This process includes formal and informal measures of evaluation based on local needs. These diverse needs eliminate any uniform outline of procedure for assessment. The procedure must be designed by each local district to develop evaluation programs based on the individual needs of the student. There are various approaches to setting up the evaluative process. One method is to plan the program first and then construct or find instruments that will adequately test the stated objectives. Another outlook consists of continuous program-evaluation which is a completely integrated process. The important factor is to find the proper method or methods that fits the individual districts needs.

Academic progress is usually shown through hard data methods such as standardized tests. Intelligence and achievement tests are usually used in the identification process; however, using these instruments to measure the results of a Gifted and Talented program is often inappropriate because programs for gifted and talented are not standardized. The purpose of a gifted and talented program is to expand thinking processes and give children the opportunity to develop their creative potential. There are no "tests" at the present time that measure all of the variable outcomes of a Gifted and Talented program. It is necessary to evaluate programs by several different methods which are deemed appropriate for the specific local program or needs.

The materials included in this section are provided to give two methods of approaching evaluation. Additional alternatives can be found in the Connecticut State Department Publication entitled CONN-CEPT VI - "Task Force Report on Evaluation and Resource Directory"(1978 Revised Edition). This publication can be of value to any program planner and should be utilized as a source book for those interested in this component of programming for the gifted and talented.

Conduct Evaluation Activities

What Measures Success?

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IMPLEMENTING THE PROCESS MODEL (7)

WHAT TO DO	DECISIONS TO MAKE	HOW TO DO IT WHAT TO KNOW
CONDUCT EVALUATION ACTIVITIES	HOW WILL WE KNOW IF WE DID WHAT WE HOPED TO DO?	Program Planning and Evaluation Process
1. Establish Criteria for Determining Successful Strategies	1. What criteria will measure success of program objectives?	1. Individual Profile of Talent Inventory
2. Monitor and Revise Processes	2. What processes and stragies were used with each student?	2. Monitoring Form
3. Conduct Appropriate Student Testing	3. What test results are available on each student?	3. List of Pre & Post Test Results on each Student
4. Interpret Results	4. What results are significant in planning the next year's program?	4. Individual Profile K-12 (To be developed)

PLANNING PROGRAMS
WITH
BUILT-IN EVALUATION/ASSESSMENT SYSTEMS

OVERVIEW

Before an evaluation/assessment can be designed or implemented, a thorough familiarity with a program's goals, objectives, activities, and contextual requirements is necessary.

The credibility of any program, and an implementor's familiarity with the program, is determined through four basic issues.

1. Why should the program exist?	The description of unique need for the program
2. What is the program?	The observable program content in terms of proposed student outcomes
3. How will the outcomes be accomplished?	A description of processes/activities which bring about the accomplishment of the outcomes
4. How will success be determined?	Appropriate information to indicate the degree of success

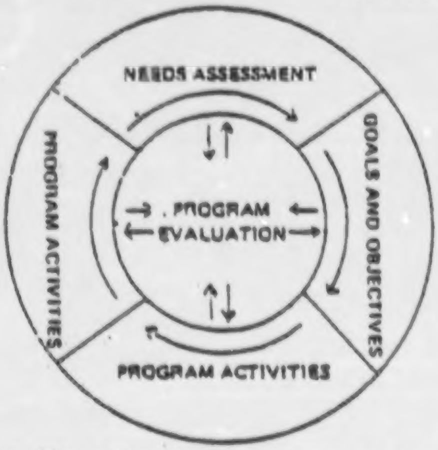
A thorough research, development, and presentation of these four issues is essential in the initiation and implementation of programs in rural schools for gifted/talented students.

The purpose of the evaluation is to provide the necessary information to improve the quality of the decisions which affect the program in terms of its value and effectiveness.

*EVALUATION OVERVIEW

Evaluation as an Ongoing Process

Program evaluation is continuing and ongoing. It occurs at the start, during and after a program has been run. One may consider evaluation as the nucleus of the program, for it interacts with the program's needs assessment, its statement of goals and objectives, and program planning and implementation. Evaluation data from the current run of a program becomes needs data for the next run.



The needs assessment gives direction for the development of program goals and objectives; program activities are developed to accomplish the stated program objectives. Carrying them out produces results of one sort or another. The evaluation process interacts with all these stages, and suggests directions for new plans and actions.

The display above suggests that there is constant feedback and revision between program evaluation and each of the four areas. One quickly notes that program evaluation cannot exist as a separate entity; it must be developed as an integral part of the program. Some of the relationships are shown in the following table:

Evaluation is an Integral Part of a Program		
Why?	Needs Assessment	What needs can you cite that justify the existence of this program?
What?	Program Goals and Objectives	To what needs are the goals of the program related? Of what goals are the objectives of the program a part?
How?	Program Activities	What activities will most likely meet the objectives? How will you plan and carry out activities that will accomplish the objectives?
How Will You Know?	Program Evaluation	What kinds of information should be gathered to determine if the activities are teaching the objectives and consequently meeting the needs?

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*Program Evaluator's Guide, the Evaluation Improvement Program
California State Department of Education, Wilson Riles, Superintendent

WHY IS AN EVALUATION DESIGN REQUIRED?

It is crucial that assessment instruments be carefully selected so that the program is accurately represented by the scores/responses elicited. Therefore, an evaluation design is required to predetermine how the program affects students.

The evaluation design gives a plan for viewing the interaction between the students and the program.

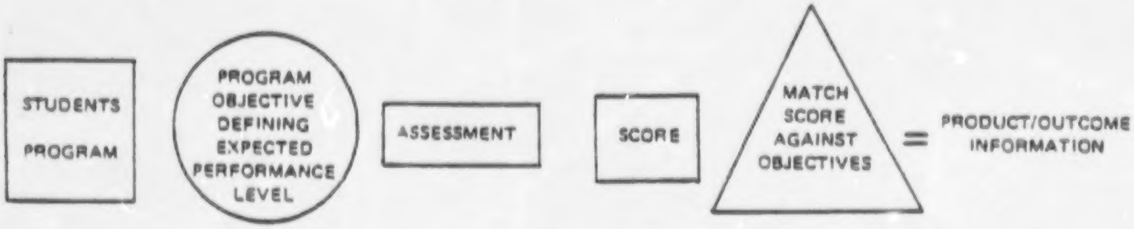
STUDENT

"interaction"

PROGRAM

(activities, teacher, environment)

The evaluation design can be simple or complex depending upon the degree of accuracy of information that is required. The design looks at the following sequence of events:


STUDENTS
PROGRAM
PROGRAM OBJECTIVE DEFINING EXPECTED PERFORMANCE LEVEL
ASSESSMENT
SCORE
MATCH SCORE AGAINST OBJECTIVES
=
PRODUCT/OUTCOME INFORMATION

PLANNING AN EVALUATION DESIGN

The evaluation of the program must consist of defining the purpose of the evaluation, determining exactly what it will accomplish, conducting the evaluation activities, and using the information to satisfy the stated purpose.

Planning - Conducting - Using

*THE EVALUATION PROCESS

PLAN	CONDUCT	USE
Determine Evaluation Purpose and Objectives	Collect Data	Report Results
Develop the General Evaluation Plan	Analyze Data	Apply Evaluation Findings
Determine the Specific Evaluation Design		
Obtain Assessment Tools		

The success of an evaluation depends upon a wise choice of evaluation design.

An Evaluation Design - A strategy for determining the effects of an instructional program on a group of students (in a special program). The program effects are compared against a standard which is based on one of three choices:

1. A separate comparison group without any special program.
2. A content or behavioral criterion.
3. The special program group serving as its own comparison group with no external standard.

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*Program Evaluator's Guide

EVALUATION DESIGN
FOR THE
MODEL PROJECT GATE IN RURAL SCHOOLS

Relationships of test (product) data, process and context data are the factors which provide for effective decision making in terms of staff development and meaningful curriculum for gifted/talented students.

Success in meeting the established needs, through the three program components is determined by three types of evaluation data: Program Data (learner changes), Process Data (supportive activities), and Context Data (learning environment).

The Process Model for implementing school options provides process and context data by monitoring what "treatment" of students is appropriate to achievement of desired outcomes.

The Staff Development Model determines the kinds and levels of knowledge required of various categories of instructional staff. The learning environment is greatly affected by the degree to which communication among staff training based on teacher needs with a process for determining success in special knowledge is gained for use in improved communication among teachers and students.

The Curriculum Design provides a framework for establishing product data concerning the success of the program in terms of proposed student growth.

Students Evaluation is assessed, in this program, through the use of Talent Identification Inventory. The Inventory allows for an assessment of the student in the following areas of giftedness and talentedness: Intellectual Potential, Academic Achievement, Creative Productivity, Psychomotor, Visual/ Performing Arts, and Leadership. This instrument given prior to program implementation and at the end of project implementation allows the evaluator or teacher to determine student change during the year (between pre and post assessments).

The following forms allow one to plan, monitor, and therefore evaluate student progress.

____
NAME

STUDENT PROFILE

PRE AND POST SCORES

From Talent Inventory

	PRE	POST
ACADEMIC ACHIEVEMENT		
Math	___	___
Reading	___	___
Language	___	___
Science	___	___
Social Studies	___	___
CREATIVE PRODUCTIVITY	___	___
LEADERSHIP	___	___
INTELLECTUAL POTENTIAL (IQ)	___	___
PSYCHOMOTOR	___	___
VISUAL AND PERFORMING ARTS	___	___

IMPLEMENTING THE PROCESS MODEL (8)

WHAT TO DO	DECISIONS TO MAKE	HOW TO DO IT
REVISE ACTIVITIES ACCORDING TO EVALUATION RESULTS	HOW CAN THE PROGRAM BE IMPROVED	Compiled Evaluation Results
1. List successful and Unsuccessful Activities	1. Which parts of the total program produce the best or least student growth	1. Complete Monitoring Form
2. Revise Needed Curriculum Activities	2. Which parts of the Curriculum Design were successfully accomplished	2. Activities which support objectives
3. Revise Program Design as Needed	3. How will the new program compare to previous program	3. Base-line information from existing program

INSERVICE TRAINING PROGRAM MODEL
FOR PROFESSIONAL PERSONNEL IN THE
EDUCATION OF THE GIFTED AND TALENTED

Philosophy

School districts function to meet the educational needs of the people they serve. To accomplish these ends, each component of the school district (general education, special education, etc.) deserves its share of resources such as time, people and funds. As you know, most decisions related to the setting of priorities among these components place "people" and "things" in competition for the all too scarce "time" and "resources." The greatest need is too often placed in the "things" category.

When we discuss training for an educational component, we are talking about a people activity. Each school district should be committed to the continuing education of all its professional personnel involved in the education of children and youth. This commitment is a natural extension of the commitment to quality education. Further, as the local school districts expand their instructional programs, add facilities and increase resources, they create or impose new expectations on instructional and ancillary staff for positive performance. As administrative and supervisory staffs expand their expertise through preservice and graduate study, their expectations for professional performance by the general staff increase. A sensitive school district should, therefore, provide alternative opportunities for the continued professional growth of those who work with gifted and talented children and youth.

The total time, human and financial resources provided by the school district for such professional orientation, preparation and inservice training will directly reflect the district's concern for professional growth and the process that brings about change to meet the needs of the gifted and talented. Commitment to improved inservice training can best be reached when:

1) the district recognizes it as part of the total educational structure
2) the participants are involved in the planning and implementation
3) the district views inservice training to be as important as other components of the educational plan

Basic Assumptions

When a school district has developed a philosophy relative to inservice training for the gifted and talented, operational guidelines must be designed to assure effective implementation of the philosophy.

These guidelines are represented by four variable components relative to the concept of inservice training: 1) human resources, 2) strategies, 3) content areas, and 4) the processes related to inservice training for the gifted and talented.

Each of these components is delineated by several basic assumptions:

1. Human Resources

    a. All target groups (Board of Education, community, administration, etc.) should have the development of professional competency in this area as a top priority.

    b. Commitment to improvement should precede the design of such improvement strategies.

    c. The local school district has a responsibility to provide for professional growth of its total staff. This in turn maximizes growth among the special groups of children and youth being served.

    d. Morale is related to competency and commitment.

2. Strategies-Instruction

    a. Recognition of individual differences demands utilization of a variety of differentiated teaching strategies.

3. Content

    a. Information and knowledge are constantly being changed, reworded, or refined.

    b. Responsible relationships with pupils and adults requires familiarity with appropriate bodies of information and knowledge.

4. Processes-In-Service

    a. School districts must determine that inservice training for the gifted and talented is a high priority of their program support system.

    b. The resource of time must be provided within which appropriate inservice activities can occur.

    c. Human and fiscal resources are essential to any well developed inservice program.

    d. Expertise required to:

        a. analyze inservice needs
        b. design and develop a program
        c. implement the prescribed program and evaluate the results gained
        e. School districts should be provided by the State Agency with models, professional assistance and resources to help establish priorities and needs for inservice education.

PART 11

PROCESSES OF INSERVICE TRAINING FOR THE GIFTED AND TALENTED

The various processes of inservice training for the gifted and talented describe those functions which must be performed in order to assess, design, develop and implement a successful training program. The design and implementation of these processes may be carried out in various ways, approaches, directions and by various clusters of target groups of those to participate in the training.

These processes are defined in the following manner:

1. Assessment of Needs - assess the current status of a school district in relation to the specifics of education of the gifted and talented.
2. Prescriptive - review the data gathered and then make selection of appropriate strategies which will initiate desired changes in staff.
3. Evaluation - appraisal which relates to the degree of success attained by the inservice program. Therefore, it is obvious that specific objectives of the training program, as well as written outcomes for professional personnel, are essential first steps to any productive evaluation.
4. Interventions - activities which reflect incorporation of various changes in objectives needs or outcomes. A continuous flow and utilization of feedback determines the effective utilization of proposed activities.

The local school district should assume primary responsibility for:

1. assessing its inservice needs relative to the education of the gifted and talented.
2. developing the goals and objectives for the gifted and talented inservice training program in their school districts.
3. specifying the outcomes they anticipate for the participants in the process.
4. initiating contact with various human resources who have the capability of providing interventions to effect their needs.
5. identifying the follow-through aspects as this relates to time, personnel and resources.

The state education agency should assume the responsibility for:

1. providing a scheme to assist the local school districts with the necessary technical assistance needed to develop the training program

2. providing a clearinghouse where the districts may obtain information relative to accessability of professional expertise needed to conduct training programs.

3. coordinating state-wide and regional workshops and institutes to demonstrate how school districts may train personnel in the education of the gifted and talented at various levels of training.

4. maintaining a continual assessment as to the needs of training in the various local school district.

by

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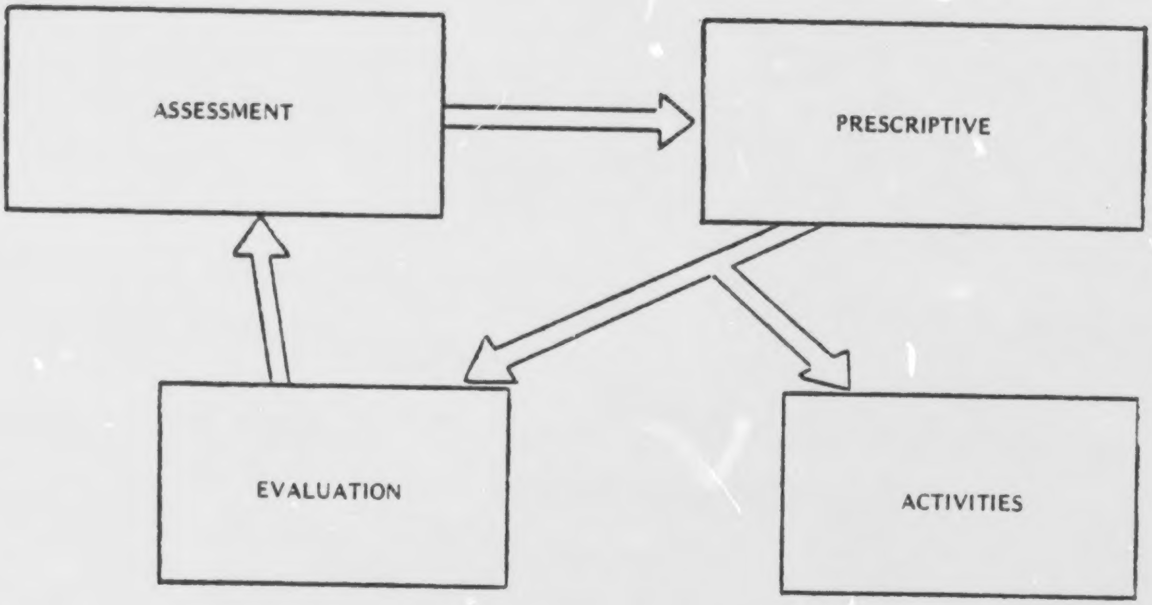
MODEL A

PROCESSES OF IN-SERVICE TRAINING

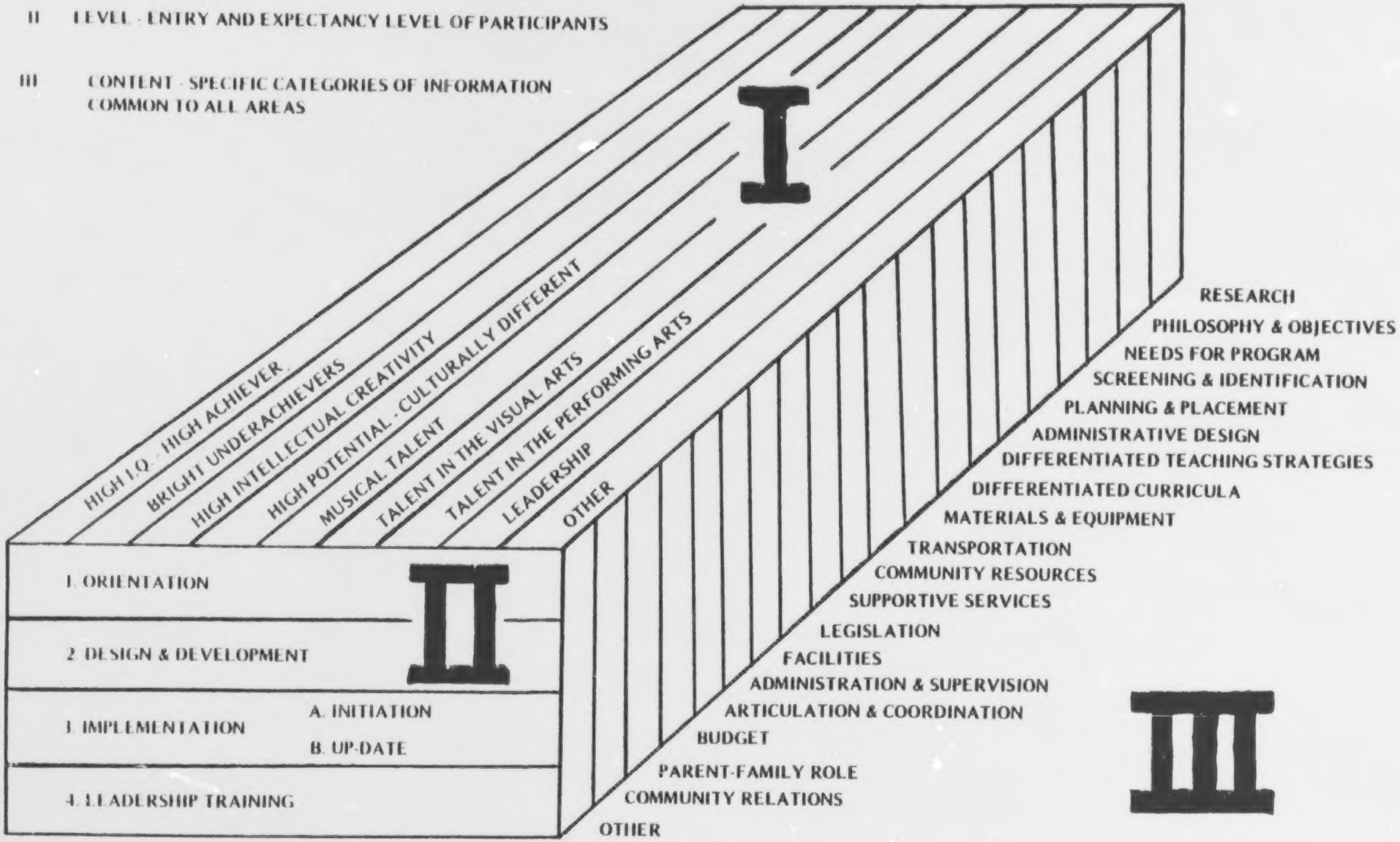

ASSESSMENT
PRESCRIPTIVE
EVALUATION
ACTIVITIES

THREE DIMENSIONS OF IN-SERVICE EDUCATION

I AREA(S) OF GIFTED & TALENTED

II LEVEL - ENTRY AND EXPECTANCY LEVEL OF PARTICIPANTS

III CONTENT - SPECIFIC CATEGORIES OF INFORMATION COMMON TO ALL AREAS


I
HIGH I.Q. - HIGH ACHIEVER
BRIGHT UNDERACHIEVERS
HIGH INTELLECTUAL CREATIVITY
HIGH POTENTIAL - CULTURALLY DIFFERENT
MUSICAL TALENT
TALENT IN THE VISUAL ARTS
TALENT IN THE PERFORMING ARTS
LEADERSHIP
OTHER
II
1. ORIENTATION
2. DESIGN & DEVELOPMENT
3. IMPLEMENTATION
A. INITIATION
B. UP-DATE
4. LEADERSHIP TRAINING
III
RESEARCH
PHILOSOPHY & OBJECTIVES
NEEDS FOR PROGRAM
SCREENING & IDENTIFICATION
PLANNING & PLACEMENT
ADMINISTRATIVE DESIGN
DIFFERENTIATED TEACHING STRATEGIES
DIFFERENTIATED CURRICULA
MATERIALS & EQUIPMENT
TRANSPORTATION
COMMUNITY RESOURCES
SUPPORTIVE SERVICES
LEGISLATION
FACILITIES
ADMINISTRATION & SUPERVISION
ARTICULATION & COORDINATION
BUDGET
PARENT-FAMILY ROLE
COMMUNITY RELATIONS
OTHER

SECTION A

(To be completed by school district)

A. Philosophy

1. Does your school district have a written policy relative to:

	Yes or No
a. inservice education	________
b. travel	________
c. conferences, conventions, workshop attendance	________

2. Does your district use inservice education as an integral part of a toral program design:

a. always ________

b. sometimes ________

c. rarely ________

d. never ________

COMMENTS:

B. Time

a. regular basis (one day a month, week, etc.) ________

b. occasionally for special programs ________

c. as part of orientation programs ________

d. summer ________

e. other ________

COMMENTS:

C. Support

1. Inservice education is supported by:

a. granting credits which are applicable to salary increments ________

b. released time ________

c. financial assistance as per contract ________

d. summer work arrangement ________

e. other ________

COMMENTS:

2. Is there a specific budget allocation in your district for inservice education (speakers, travel, etc.)

a. Yes ________

b. No ________

COMMENTS:

D. Professional Staff

1. Involvement

a. To what degree are teachers involved in developing inservice programs

1. always ________
2. sometimes ________
3. rarely ________
4. never ________

COMMENTS:

2. Selection
    - a. voluntary __________
    - b. appointed __________
        - 1. administrator __________
        - 2. teachers associations __________
        - 3. combination (1 and 2) __________
        - 4. other __________

COMMENTS:

SECTION B

(Refers to Model 11)

Side 1 - Areas of the Gifted and Talented

The following target group(s) of gifted and talented children and youth are in need of inservice program development:

- a. High I.Q. - High Achiever __________
- b. Bright Underachiever __________
- c. High Intellectual Creativity __________
- d. High Potential - Culturally Different __________
- e. Musical Talent __________
- f. Talent in the Visual Arts __________
- g. Talent in the Performing Arts __________
- h. Leadership __________
- i. Other ______________________________ __________

    ______________________________ __________

    ______________________________ __________

Side 11 - Entry and Expectancy

A. Entry Point

1. Public(s)

The development of inservice programs should reflect participation of:

a. Board of Education ________

b. Administration ________

c. Teachers ________

d. Ancillary Staff ________

e. Parents ________

f. Combination (please specify)

____________________________ ________

____________________________ ________

g. Others (please specify)

____________________________ ________

____________________________ ________

2. The designing of inservice should reflect the current status of the population to be served. The group(s) identified in A-1 is at the following level of entry:

a. Orientation for program ________

b. Design and Development of a program ________

c. Implementation of a program ________

1. initiation ________

2. expansion and/or update ________

d. Leadership training ________

B. Expectancy

State in specifics what is expected of the group(s) at the completion of the inservice process.

1. The statements should reflect responses given in A-1 and A-2 and should be stated in behavioral terms.

____

____

____

Side 111 - Content

Please check the content components which should be included in the inservice program:

a. Research ________

b. Philosophy and Objectives ________

c. Needs for Program ________

d. Screening and Identification ________

e. Planning and Placement ________

f. Administrative Design ________

g. Differentiated Teaching Strategies ________

h. Differentiated Curricula ________

i. Materials and Equipment ________

j. Transportation ________

k. Community Resources ________

l. Supportive Services ________

m. Legislation ________

n. Facilities ________

o. Administration and Supervision ________

p. Articulation and Coordination ________

q. Budget ________

r. Parent-Family Role ________

s. Community Relations ________

t. Other ________

INSTRUCTIONAL MANAGEMENT SYSTEMS: A MODEL FOR ORGANIZING AND DEVELOPING INSERVICE TRAINING WORKSHOPS

(Applications for Trainers of Teachers of the Gifted and Talented)

Joseph S. Renzulli

Bureau of Educational Research
University of Connecticut

As its name implies, this model is designed to provide a system for developing inservice training modules that can be used by persons who will have the responsibility for training teachers. These persons might be college faculty members, educational consultants, or classroom teachers who are assuming leadership roles in staff development. This version of the model was developed with particular reference to trainers of teachers of the gifted and talented. The model grew out of a concern about the questionable effectiveness of short-term workshops and the limited impact that these one-afternoon or one-day experiences usually have on teachers who are attempting to acquire new skills in relatively short periods of time. Although short-term workshops have a great potential for bringing about educational improvement, this potential will not be realized unless we avoid haphazard approaches that do not provide for the continuous development of workshop participants. The one-shot "dog-and-pony-show" type of workshop conducted by a charismatic visiting "expert" might provide us with the inspiration needed to get started, but a more organized approach is required if there is going to be any follow-through and long-term benefits.

In the area of education for the gifted and talented, we are faced with somewhat of a dilemma. On one hand, there is an almost urgent need to prepare qualified teachers for the rapidly growing number of school programs that serve this segment of the student population. At the same time, there is a limited number of undergraduate and graduate training programs, many teachers are unable to participate in full-time study, and limited human and financial resources prohibit the implementation of comprehensive (long-term) training programs. Thus, the short-term workshop represents one of the few viable alternatives for meeting the training needs in this area of special education.

The Instructional Management System (IMS) approach for organizing inservice training is intended to assist trainers in the design, development, and dissemination of information about teaching strategies and instructional materials. One of the major objectives of an IMS is to compress a large amount of highly relevant information into a relatively short training period. A second objective is to provide a "structure of knowledge" about the topic or teaching strategy that is being presented in the IMS. Such a structure will enable trainees to continue their study of a particular topic in a systematic

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The Gifted Child Quarterly, Summer, 1977, Vol. XXI, No. 2

and organized fashion. By carefully structuring the topic and providing a wealth of back-up information and materials, the inservice trainer can extend the potential impact of a workshop far beyond the one or two hours that are actually spent in a face-to-face relationships with trainees.

A third objective of the IMS approach is to provide a series of "packaged" workshops that can be easily used by other trainers. A great deal of time and effort is required for the development of a comprehensive IMS, but once the material has been collected and organized, other trainers can benefit from the work of persons who have actually developed the systems. Quite obviously, the developer of an IMS will have certain levels of understanding that may not be achieved by other trainers who follow in his or her footsteps, but at the same time, each user of an IMS will bring to it his or her own knowledge, experience, and dynamic qualities (i.e., "personality"). Thus, each user of an IMS has the opportunity to make creative adaptations and additions to the system.

An Instructional Management System for training teachers of the gifted and talented is basically a coordinated body of information that is designed to accomplish the objectives discussed above. This information usually consists of four general types, each of which will be described in the following sections.

I. Rationale

The first part of an IMS should consist of a brief rationale that points out why a particular approach to learning is appropriate and challenging for gifted students. One of the major criticisms of programs for the gifted is that they frequently consist of activities that are essentially appropriate for all learners. For this reason, it is important to explain to workshop participants the unique extensions, modifications, and adaptations that are possible when working with highly able youngsters.

An abbreviated example of such a rationale may help to clarify this point. The area of creativity training is almost universally recommended as a major approach to working with gifted and talented children. Although such training is good for all youngsters, there are at least two major reasons why it is a defensible practice for gifted youngsters. First, creativity training focuses on the development of a thinking process (rather than content mastery). The development of such processes is particularly important for persons who have the potential to be the leaders and problem solvers of the future. Youngsters with extremely advanced abilities should be provided with equally advanced levels of creativity training so that they can bring this process to bear on the problems that they will attack, both now and in their future lives.

The second part of the rationale that supports the use of creativity training with the gifted and talented is perhaps even more compelling than the first. One of the key features of a good creativity training exercise is that is is openended -- that is, there are no predetermined (correct) responses. For this reason, the respondent can "go as far" as his or her intelligence, background, and motivation (to solve the problem) allows. In other words, giftedness and creativity are in the response, not the problem or training exercise.

Consider the following creativity training exercise: "What would happen if the world's energy supply were suddenly reduced by fifty percent?" This exercise could be used with young children, with college students, and even with the president's advisors on energy policy. Quite obviously, older, brighter, and more knowledgeable persons will provide more sophisticated responses, but nevertheless, the problem is openended enough to be a challenge to a wide variety of persons. In a regular classroom, all youngsters could respond to this problem, however, the gifted child' greater knowledge, abstract reasoning ability and understanding might result in more creative suggestions.

The rationale for an IMS need not be long and elaborate, but it should point out the essence of a particular approach to learning so far as the gifted and talented are concerned. An important item that should be included in all rationales is the ways in which we are attempting to extend or escalate learning experiences beyond the level that is appropriate for learners. Basically, the rationale should provide the workshop participant with a ready-made answer to the question: Why is (this particular learning activity) especially appropriate for gifted and talented students?

II. Workshop Activities and Materials

A. Theoretical Information. This information usually consists of books and articles that provide a theoretical basis for the topic being covered in the IMS. For example, in the area of creativity training, information about basic principles, models, and theories might be covered by making reference to the work of E. Paul Torrance or J.P. Guilford. It is important to keep in mind that most teachers will not be interested in "too much theory," and therefore, this part of the training should simply attempt to answer the following two questions:

1. What are the basic principles underlying this particular learning activity?

2. What are the major reference works in this area of involvement?

The second question is intended to serve those persons who would like to do some further study in a particular area. The best way to assist these persons is by providing a short but carefully selected bibliography of basic reference materials. It is at this point that the developer of an IMS can use his or her knowledge and time effectively, and thereby save time for workshop participants. It is better to provide participants with three or four key references (that strike right at the heart of the problem) than a long, but unselected bibliography.

B. Demonstration Activities. Activities that demonstrate teaching strategies or the appropriate use of certain materials should be the central focus of a workshop. These activities should be demonstrated with children or workshop participants and every effort should be made to encourage the actual involvement of teachers. One of the major criticisms of most workshops is that participants spend too much time "sitting and listening." Whenever possible demonstration activities should profoundly illustrate one or more of the underlying principles discussed in the rationale.

C. Samples of Exemplary Teaching. A good IMS should include some film or video tape segments that also portray important teaching principles. While the principles may also be illustrated through the demonstration activities discussed above, such coverage should not be left to chance. It is important, therefore, to have some "back-up" examples on tape or film because a goal of every workshop should be to include as much classroom action as possible. The developer of an IMS should continually be video taping and editing examples of good (and even poor) teaching so that he or she can develop a storehouse of action-oriented materials. These materials will allow workshop participants to "visit" many classrooms and observe many teachers in a short period of time. It should be reemphasized, however, that tape and film segments should be only a few minutes in duration, and their main purpose should be to illustrate a general teaching principle or strategy.

D. Lists of Exemplary Programs. Many workshop participants are interested in follow-up visits to exemplary programs. The trainer can be of invaluable assistance in this regard by simply developing a directory of places for possible visitation. The directory should include a brief description of the program, age or grade levels served, and the name, address, and phone number of a contact person. State department of education personnel can usually be of assistance in compiling a list of visitation sites.

E. Catalogues and Descriptions of Available Materials. Almost all workshop participants are literally "hungry" for information about available materials. This information should be provided by means of two types of hand-outs. The first should be a list of basic material with which the developer of the IMS is familiar. A brief set of specifications for each item on the list should include: the title and author of the material, the objectives, age/grade level(s), time and cost factors, and the place from where the materials can be obtained. Following is an example of descriptive information taken from a resource catalogue:

Title: Booster Box for Imagination and Self Development
Author: Dr. William O. Uraneck
Publisher: D.O.K. Disseminators of Knowledge
71 Radcliffe Road
Buffalo, New York 14214

Price and Order No: $2.95 - Primary - Order #LC-901
$2.95 - Grades 4-6 - Order #LC-902
$2.95 - Grades 7-12 - Order #LC-903

Grade Level(s): Primary, Grades 4-6, Grades 7-12
Content Area(s): General
Format: Boxes containing 24 learning experience cards
Description: Each Booster Box contains 24 creative learning experience cards aimed at motivating pupils to think about day-to-day experiences and problems.

Examples: "Teacher's Birthday," "Things you Like," "Helping," "Anger," "Jobs," etc.

The cards are designed to be used for learning centers, small group work, single student seat work, or with the entire class.

The second type of hand-out should be a list of catalogues that provide categorical information about large amounts of material in a particular area. Following is an example of such a catalogue in the area of simulation and learning games:

Zuckerman, D.W. and Horn, R.E. (Eds.). The Guide to Simulation/Games for Education and Training. 1973, 501 p. $15.00

This book contains descriptions of more than 600 simulation/games that are classified into 20 topical areas. Each description includes information about: the type of simulation, the number of players, necessary equipment, the amount of time involved, and the cost and source of the material. The book can be ordered from: Information Resources, Inc., P. O. Box 417, Lexington, Mass. 02173.

F. Materials Evaluation Forms. If we assume that one of the teacher's post-workshop activities will be the further exploration and analysis of materials, it is important to provide participants with some guidance for this activity. Therefore, one of the responsibilities of an IMS developer should be to construct an evaluation form that calls attention to important characteristics of materials in the area upon which the IMS focuses (An example of such a form is presented in appendix A). In view of the widely varying degrees of quality that exist among commercially available materials, it is important for inservice trainers to provide some direction in separating well-developed materials from the "junk" that has inundated the education market. Once again the developer's advanced knowledge of a particular area will save participants a great deal of time so far as developing evaluative criteria is concerned.

III. Student Materials

A. No-Fail Introductory Activities. The effectiveness of many new activities is often dependent upon the initial success that both teachers and students have with the new materials. Thus, it is important to provide teachers with an introductory activity that will work well under almost any circumstances. The developer of an IMS should take great care to search out or construct a few "no-fail" introductory activities. These activities should be demonstrated in the workshop and participants should practice using the activities until they feel completely confident about their ability to use them with their own students. Many teachers have difficulty "getting started" on new teaching strategies and therefore, a major responsibility of the inservice trainer should be to provide no-fail entry activities that will bridge the gap between the workshop and the classroom.

B. Student Information About the IMS. One of the things that we often neglect to do in our teaching is to inform students about the educational objectives of learning activities. Professional educators who work in the area of the gifted spend a great deal of time talking about the "higher mental processes," but all too often, children still believe that the major goal of learning is to acquire information. If one of our goals is to be more process-oriented (rather than content-oriented), then we should spend a small amount of time actually teaching youngsters about the meanings of various processes. The developer of an IMS in the area of simulation and learning games, for example, should prepare a sample list of post-game discussion questions that will enable students to analyze a simulation experience in terms of their personal and social growth or the development of their logical thinking abilities.

In other words, we can help students to analyze the process-goals of simulation by providing workshop participants with some examples and guidelines relating to this activity. This often-neglected but very important step in the overall learning process will help gifted students gain a greater appreciation for differentiated experiences.

C. Guidelines for Productivity in the IMS. One of the goals of a good program for the gifted should be to provide advanced opportunities for creative and productive involvement for students who are particularly motivated in a certain area of study. The developer of an IMS can help to achieve this goal by supplying workshop participants with some carefully selected references or guidelines for productivity in a particular area.

Perhaps an example will help to clarify this dimension of an IMS. Let us assume that as a result of one or more teacher-directed activities in simulation and learning games, a certain youngster decides that she would like to try her hand at developing a game. At this point, the teacher should be aware of resources such as the following:

Glazier, Ray. How To Design Educational Games. Cambridge, Mass: ABT Associates, 1969.

McConville, Robert. The History of Board Games. Palo Alto, Calif: Creative Publications, Inc., 1974.

Both of these books are excellent how-to-do-it references. The developer of an IMS should continually be collecting such materials and passing them along to teachers. This type of reference material will provide excellent guidance for extending or escalating the creative/productive abilities of gifted students.

D. Advanced Training Opportunities and Resources. Students with extremely advanced potentials may need access to training that is above and beyond that which can ordinarily be provided in a regular school setting. Such opportunities might consist of music camps, writer's workshops, summer stock theater groups, college courses, or internship programs. They might also consist of community persons with special talents or abilities. Once again, the developer of an IMS can provide invaluable assistance to workshop participants by (1) supplying them with a list of such resources, and (2) providing guidelines that will enable teachers to compile their own lists of local and regional advanced level opportunities.

IV. Program Evaluation

The final type of information that should be provided in workshops based on the IMS approach consists of methods by which the teacher can obtain evaluative information about instructional effectiveness. The developer of an IMS should collect and disseminate to workshop participants questionnaires, tests, behavioral observation checklists, and interview schedules that will enable teachers to gather and analyze student feedback. An IMS on creativity training, for example, should include a brief listing and description of the major creativity tests and rating scales that are available in this area of development. Similarly, an IMS on independent study should provide participants with a copy (or reference) to The Student Attitude Toward Independent Study Questionnaire* (SATIS-Q). Evaluative information obtained through the use of feedback mechanisms can serve the twofold purpose helping teachers to improve their instructional approaches and providing empirical support for programs that serve gifted and talented youth.

SUMMARY

The system for inservice training presented above is, obviously, much more complicated than the "one-to-one workshops" that are currently popular in many areas of education. (In a one-to-one workshop, teachers learn a particular skill which they, in turn, teach to their children.) The IMS approach also places a rather large and time-consuming responsibility on persons who develop a system because it requires the scholarly and comprehensive treatment of a particular topic. But it is precisely this investment of the developer's time coupled with the IMS organizational pattern that will allow for maximum coverage of a topic in a relatively short period of time and will encourage teachers to further pursue a topic beyond the one or two hours spent in the workshops. If we are going to advance the level of inservice training in the preparation of teachers for the gifted, then it is important to go beyond workshops that are merely informative or entertaining.

One of our goals in teaching gifted children is to provide them with the tools for continuous learning and involvement -- learning that will extend *beyond* the single lesson or activity. Shouldn't we provide similar learning experiences for teachers of the gifted?

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[1] Stewart, E.D. and Howard, M.R. *The Almost Whole Earth Catalogue of Process Oriented Enrichment Activities*. Wethersfield, Connecticut: Creative Learning Press, 1977.

[*] A more detailed discussion of this objective and strategies for achieving it can be found in: Renzulli, J.S., *The Enrichment Triad Model*: *A Guide for Developing Defensible Programs for the Gifted and Talented*. Wethersfield, *Connecticut: Creative Learning Press, 1977.*, also elsewhere in this issue.

[*] Renzulli, J.S. and Gable, R.K. "*A Factoral Study of the Attitudes of Gifted Students Toward Independent Study*. "Gifted Child Quarterly, 1976, 22: 91-99.

THE STATE OF CONNECTICUT CLEARINGHOUSE FOR GIFTED AND TALENTED: AN OVERVIEW

By Jean Blanning

The State of Connecticut Clearinghouse for the Gifted and Talented, funded under a two-year grant from the Office of Gifted and Talented (Office of Education of the Department of Health, Education and Welfare) to the State Department of Education in Connecticut, provides a network with the state's six Regional Education Service Centers. Resources, consultants and communications regarding education of the gifted and talented result from this effort.

Representatives from each region compose a State Team on Gifted and Talented which advises the Clearinghouse and informs it on local and regional needs. Each regional center receives materials to establish a core library of resources for reference and use in programming for the gifted and talented. In each region consultants conduct workshops appropriate to the needs of the personnel in programs for the gifted and talented and for others interested in the education of these children and young people at all age levels. School districts request information about workshops relating to their specific needs and level of awareness about education of the gifted and talented.

Professional and lay personnel consult the Clearinghouse for information regarding the establishment of programs on improving existing programs. Resource and reference materials aid in answering their questions.

Model programs, in the format of training packets and curriculum units, will serve as examples for those who want to learn how to establish programs or to strengthen existing programs. A Directory of consultants with experience and expertise in a wide range of areas for education of the gifted and talented, organizations, and an annotated bibliography of materials will serve as a valuable resource need.

Cooperation among the six regions in all the above areas finds expression in a newsletter which announces items of mutual interest, presents columns for teacher, student and parent voices, and solicits inquiries and information from its readers.

The genius of the Clearinghouse is in its integration of the Regional Education Service Centers and the State Department of Education, a linking which provides breadth and depth of exchange. The State Department of Education's perspective and the regional view enable detailed planning and vital communication to meet the needs of gifted and talented students and those who serve them.

Owing to its existence, professional personnel from every state seek information from the Clearinghouse. The Clearinghouse itself seeks information on programs for gifted and talented from each of the states. Correspondence with personnel in other countries also occurs. Resource networking expands beyond its intended borders.

This project is funded by the U.S. Office of Education through a grant to the Connecticut State Department of Education.

CONNECTICUT STATE DEPARTMENT OF EDUCATION
Division of Instructional Services
Bureau of Pupil Personnel and Special Educational Services

STATE PLAN FOR THE EDUCATION OF THE GIFTED AND TALENTED
1975 - 1980

Section 1

Overview

Connecticut has been concerned with the problems of the Gifted and/or Talented since 1955, when John Hersey served as Chairman of the initial study committee on the gifted and talented in Connecticut which made a report to the Connecticut State Board of Education. According to him, "Our uncertainty about exactly how to develop talent is only part of the greatest unsolved problems in American education - the problem of how to help every child realize his or her maximum potential."

The Connecticut State Plan activates the findings of both the White House Task Force Report on the Gifted and Talented of 1968 and the U.S. Commissioners' Report of 1971 by providing the three major components to implement a state-wide program for the gifted and talented. The Department provides: 1) a full-time consultative position in the Bureau of Pupil Personnel and Special Educational Services to assist LEAs in designing and developing special education programs for such children and youth; 2) a state statute to provide two-thirds excess cost reimbursements to LEAs for such programs and 3) provides professional development programs to train professional personnel through college and university graduate programs and inservice training provided by the Department. Equal opportunities for all children and youth is the Departments' basic educational position; equal opportunities for those with special needs, including the gifted and talented, is a top priority with the Department.

Position Statement

The Department of Education recognizes the needs of all children and youth being served by its one hundred sixty four school districts and assists them in developing educational programs which provide maximum opportunities for all children and youth to fulfill their capabilities.

The Department of Education recognizes that many children and youth in Connecticut have special needs which cannot be met in general education, but which can be provided through special programs and/or services. These special programs and/or services are needed by many types of exceptional children and youth ranging from the severely handicapped to the highly gifted and talented.

Connecticut's legislation, Section 10-76(a-j) of the Connecticut General Statutes reflects its commitment to all children and youth requiring special education. Equal opportunities for all children and youth with special education needs are provided for under this statute. The gifted and/or talented in Connecticut are those possessing extraordinary learning ability and outstanding talent in the creative arts. These two definitions include both demonstrated and potential ability and talent and include differentiated experiences and activitites for those who have very superior demonstrated ability, the potential to gain such ability, bright underachievers, high creative producers, outstanding talent in music, the visual and the performing arts.

It is the Department's position that these children and youth are found in every school district regardless of age-groups, ethnic groups, socioeconomic conditions and geographical environments. The gifted and talented know none of these barriers and they possess the demonstrated and potential ability to become the future leaders of Connecticut and America as a whole.

CONNECTICUT STATE PLAN FOR THE GIFTED AND TALENTED
1975 - 1980

Section 2

Assessment of Needs
Historical Perspective

The Bureau of Pupil Personnel and Special Educational Services of the Department of Education conducted its initial survey of the LEAs in Connecticut in 1966-67. This survey indicated that only four (4) of the then existing one hundred sixty-nine (169) LEAs had formed programs for the gifted and talented. It also indicated that less than five hundred gifted and talented children and youth were being provided with an organized program for the gifted and talented.

Based on an incidence of 10% of the public school population of 600,000, this meant that the needs of approximately 60,000 of such children and youth were not being served in our public elementary and secondary schools throughout the State.

Since 1967, the Bureau has undertaken an annual survey of the needs of the gifted and talented throughout Connecticut. The survey usually attempts to ascertain the numbers of such children and youth being served; the numbers of programs in the LEAs; the number of professional and paraprofessional personnel involved with the gifted and talented; the number of professional personnel being trained through our graduate training programs.

Since 1967, the number of approved programs has increased from four (4) to eighty (80), serving approximately 5,000 of the 60,000 eligible (10% incidence) gifted and talented children and youth in Connecticut or approximately 8 1/3% of the eligible population. Based on current projections Connecticut with its existing permissive legislation could be serving approximately 12,000 eligible gifted and talented children and youth by 1980 which would be 20% of those eligible or 2% of the total public school population. This projection is based on the same rate of growth the programs enjoyed between 1967 and 1974.

CONNECTICUT STATE PLAN FOR THE GIFTED AND TALENTED
1975 - 1980

Section 3

I. Goals and Objectives

Introduction

The goal of the Connecticut State Board of Education with respect to the education of children and youth requiring assistance for their extraordinary learning ability and/or their outstanding talent in the creative arts is that these children and youth be provided with adequate programs and services to meet their special needs.

Most of the goals and objectives of this plan derived directly from Sections 10-76a through j of the General Statutes.

With some exceptions "goals" and "objectives" are stated as anticipated activities of LEAs; "Strategies" are stated as anticipated activities of the State Board of Education to enable LEAs to achieve their goals and objectives.

These goals, objectives and strategies are not stated in terms of behavioral objectives for either children or professional staff, their achievements would certainly make a strong impact on professional activities and on the education of Gifted and/or Talented.

II. Procedures

The total picture of the education of the gifted and/or talented was studied by various means including a survey of all LEAs; a random stratified sample of all professional personnel in special education and pupil personnel positions; a survey of colleges and universitites involved in teacher preparation; interviews with parents, lay and professional groups working with the gifted and/or talented; a random sample survey of instructional staff in the LEAs; and a needs assessment survey conducted through two regional meetings on the gifted and talented.

After the identification of the goals, objectives were formulated in terms of what LEAs would do in order to attain the goals. Finally, strategies were developed. Strategies are those activities undertaken by the State Department of Education to enable the LEAs to achieve the objectives set for them as stepping stones toward the ultimate achievement of the major goals.

Reactions were sought from the following:

1. The Connecticut Association for the Gifted
2. State Federation of the Council for Exceptional Children

3. State Advisory Council on Special Education
4. The State Advisory Committee on Professional Development in Special Education
5. State Task Force on Gifted and/or Talented
6. All Local Programs for the Gifted and Talented

III. Goals, Objectives and Strategies

Goal #1 THE GENERAL ASSEMBLY, THROUGH ITS JOINT STANDING COMMITTEE ON
2-76 EDUCATION, KEEPS ITSELF CONTINUALLY INFORMED ON THE CONDITION, PROGRESS
thru AND NEEDS OF PROGRAMS FOR THE GIFTED AND TALENTED IN CONNECTICUT AND
6-80 TAKES APPROPRIATE LEGISLATIVE ACTION TO PROMOTE, SUPPORT AND IMPROVE
THE EDUCATION OF SUCH CHILDREN AND YOUTH.

Objective #1 The General Assembly, through its Joint Standing Committee
3-76 on Education, annually receives and reviews a comprehensive report from
the State Board of Education describing the educational status, needs and
recommendations relating to the improvement of the education of the gift-
ed and talented in Connecticut.

STRATEGIES: the State Board of Education shall:

1. make an annual comprehensive report of the status and needs of the
2-76 education of the gifted and talented in Connecticut to the Joint
thru Standing Committee on Education of the General Assembly and annually
2-80 reviews said report with said committee or appointed sub-committee.

2. encourage the Joint Standing Committee on Education to introduce into
2-76 the General Assembly legislation conducive to the improvement of ed-
thru ucation for the gifted and talented in Connecticut.
2-80

Goal #2 EACH CONNECTICUT LEA PROVIDES APPROPRIATE SPECIAL PROGRAMS
9-80 AND SERVICES FOR ALL CHILDREN AND YOUTH POSSESSING EXTRAORDINARY
LEARNING ABILITIES AND/OR OUTSTANDING TALENT IN THE CREATIVE ARTS

Objective #1 Each Connecticut LEA submit a plan to the State Board of Education detailing the following:

9-78 a. methods to be followed for locating children and youth who may possibly be identified as being Gifted and/or Talented, along with methods and procedures for positive identification and the criteria for eligibility

b. the current extent of provisions for the gifted and talented by the LEA

c. the needs for:

(1) Instructional and ancillary staff

(2) Facilities, equipment and materials

(3) Transportation

(4) Special Consultative Services

(5) "Out of School" placement

d. the procedures to be used in planning and providing differentiated programs and/or services to the gifted and talented

e. the schedule and means by which the LEA will provide appropriate services and programs to all eligible children

STRATEGIES: the State Board of Education shall develop and disseminate the following:

1-76 a. Prior approval forms to LEAs

1-76 b. Appropriate definitions on gifted and/or talented children and youth for whom the LEAs are responsible

8-76 c. Procedures by which the gifted and/or talented may be identified

1-77 d. Criteria whereby LEAs shall determine the eligibility of the gifted and talented

1-76 e. "A Guide to Administrative Regulations, and Policies and Procedures in the Provisions of Differentiated Programs for the Gifted and Talented in Connecticut"

1-76 f. Any plans which may be necessary to assist LEAs in meeting special program needs such as:

1. new or expanded inservice training programs
2. use on non-LEA screening and identification processes
3. proposing mandated legislation for the gifted and talented
4. designing plans for regional programs for the gifted and talented
5. utilizing Regional Educational Centers to provide technical assistance to school districts in their respective areas

5-76 thru 5-80 g. Reviews, evaluates and informs LEAs as to the acceptance of their prior-approval plans and/or the necessary revisions along with deadlines for submitting them

9-79 Objective #2 Each LEA completes the implementation of its prior approved differentiated programs for the gifted and/or talented and reports progress to the State Department of Education at the conclusion of the school year.

STRATEGIES: the State Board of Education shall:

4-76 a. develops methods to use Regional Educational Centers to assist the Department in collection of data and reviewing progress reports of LEAs in their respective districts.

4-77 b. develops and distributes to each LEA a form(s) designed to collect data indicating the extent to which LEAs are progressing in the implementation of their prior approved programs

4-78 c. review progress reports and indicate to each LEA the degree of acceptability of such progress and make specific recommendations

9-79 Objective #3 Each LEA completes and fully implements its prior approved plan and continues to provide and improve differentiated programs for the gifted and talented.

9-79 a. each LEA reports the status of its gifted and talented programs and services to the State Board of Education and such reports, indicate as a minimum, adequate programs and services for the gifted and talented.

9-79 b. each LEA indicates new approaches, expansions and/or developments that have been or are planned to be introduced in the differentiated programs for the gifted and talented.

STRATEGIES: the State Board of Education shall:

1-76 a. designs and introduces into the General Assembly legislative proposals aimed at mandating special education programs for the gifted and talented in Connecticut.

1-77 b. develops and distributes a form designed to indicate the degree to which each LEA has fully implemented its prior approved programs for gifted and talented.

7-76 c. develops and implements an effective delivery system for informing and encouraging all LEAs to consider and introduce more promising and effective differentiated approaches to the education of the gifted and talented. The delivery system will be developed by organizing the Regional Educational Centers to become an integral part of such a delivery system.

1-77 d. reviews LEA reports, prior approved programs and, in cases where plans have not been fully implemented, requires full implementation according to conditions acceptable to the State Board.

9-79 Goal #3 ALL CONNECTICUT LEAs CONTINUOUSLY IMPROVE THE QUALITY OF THEIR PROGRAMS FOR GIFTED AND TALENTED CHILDREN AND YOUTH (10-76b).

9-77 Objective #1 All LEAs submit to the State Board of Education a plan for the continuous evaluation of the quality of their differentiated programs in terms of behavioral objectives established for gifted and talented children and youth.

STRATEGIES: the State Board of Education shall:

9-75 a. develops and distributes a "Guide to the Evaluation of Programs for the Gifted and Talented."

12-76 b. provides opportunities for appropriate LEA staff to become competent in the techniques of evaluation of differentiated programs for the gifted and talented through workshops and seminars conducted through various Regional Educational Centers.

2-78 c. develops and distributes a form on which all LEAs submit to the State Board of Education their plans for continuous evaluation of their programs for the gifted and talented.

2-79 d. reviews each LEAs plans for evaluation and makes appropriate recommendations.

9-79 Objective #2 All LEAs revise and improve their educational goals, objectives, differentiated strategies and evaluative procedures with respect to programs for the gifted and talented.

STRATEGIES: the State Board of Education:

7-79 a. require biennial reports from all LEAs indicating their revisions and improvements of evaluative procedures

8-79 b. review and makes appropriate recommendations concerning said revisions

9-80 Objective #3 All LEAs provide effective inservice training programs for those professional and para-professional staff members involved in the education of gifted and talented children and youth.

STRATEGIES: the State Board of Education:

9-76 a. prepares and distributes to all LEAs a "Guide to Inservice Training for Professional Personnel in the Education of the Gifted and Talented."

9-75 b. assists in the provision of technical assistance, and materials, and equipment necessary for effective inservice training of staff at the LEA level.

9-75 c. organize and develop structure to involve the Regional Educational Centers in assisting their respective LEAs in providing effective inservice training.

9-80 Objective #4 All LEAs design and develop differentiated curricula and teaching strategies as primary components of their special education programs for the gifted and talented.

STRATEGIES: the State Board of Education:

9-75 a. prepares and distributes to all LEAs a "Guide to Differentiated Curricula and Strategies for Gifted and Talented Programs."

9-75 b. assists in the provision of technical assistance and differentiated materials and resources necessary for effective differentiated programming at the LEA level. Regional Education Centers will be used to assist in this strategy.

1-76 Goal #4 DEVELOPMENT OF INTER-DISTRICT EDUCATIONAL PROGRAMS

9-76 Objective #1 LEAs are to identify target groups of students who could best be served by inter-district programs.

STRATEGIES: the State Board of Education shall through the Regional Educational Centers:

9-75 a. disseminate information to LEAs describing successful inter-district efforts in Connecticut and other states.

1-76 b. provide technical assistance to LEAs to plan inter-district programs.

Objective #2 LEAs to develop and submit plans to the State Board of Education for inter-district programs.

STRATEGIES: the State Board of Education shall:

4-77 a. develops and distributes criteria describing acceptability of inter-district programs for the gifted and talented.

4-77 b. develops and provides form(s) for use by groups of LEAs in applying for approval and funding of cooperative gifted and talented programs.

2-78 c. reviews and takes action as to approval of inter-district differentiated programs for gifted and talented children and youth.

9-78 Objective #3 LEAs shall implement approved inter-district programs.

3-79 Objective #4 LEA inter-district units shall evaluate the effectiveness of their programs annually.

STRATEGIES: the State Board of Education shall:

1-76 a. encourage applications for funding from LEAs under appropriate legislation, Section 10-76e of the General Statutes.

1-76 b. encourage LEAs to work through existing Regional Educational Centers for the provision of technical assistance and information relative to criteria for approval and evaluations of such programs.

CONNECTICUT STATE PLAN FOR THE GIFTED AND TALENTED
1975 - 1980

Section 4

SUMMATION:

A. The five year plan for special education for the gifted and talented was initially drafted in February 1974.

B. The State Board of Education through its Bureau of Pupil Personnel and Special Educational Services began to implement it immediately.

C. The goals, objectives and working strategies are quite comprehensive and will require a tremendous number of work hours before they can be achieved. Steps have been taken to mobilize all professional and lay personnel related to the education of the gifted and talented throughout Connecticut so that these goals might be achieved by the dates indicated.

D. The plan encompasses the three basic concepts of good planning.

1. Position Statement
2. Needs Assessment
3. Goals, Objectives, Strategies

It should be noted that the various key components necessary for a quality state program for the gifted and talented are contained in Section III of the plan. For example, Objective #1 of Goal #2 requires each LEA to submit a comprehensive plan for their gifted and talented children and youth. Sequentially through Strategy #1, the SEA will provide a delivery system and technical assistance to assist the LEA in achieving this objective.

As the state plan is read you will note the sequential development in this section with:

1. prior approval of LEA programs and plans
2. screening and identification of pupils
3. minimum services to such children and youth
4. inservice training and professional development at graduate level
5. consideration by LEAs to introduce more promising programs
6. plans for continuous evaluation
7. developing and disseminating various guides and information to LEAs for utilization by gifted and talented programs
8. revising and improving goals, objectives, etc. at LEA and SEA levels
9. encouraging regional and inter-district program development by groups of LEAs
10. legislative implications for the General Assembly
11. encouraging various strategies for change

CONNECTICUT'S PROGRAMS FOR THE EDUCATION OF THE GIFTED AND TALENTED

I. Introduction

For the past twelve years, Connecticut has attempted to solve one of the greatest problems in American education - the problem of how to help every child realize his or her maximum potential. One of the major sub-problems is our uncertainty about exactly how to identify and develop the demonstrated and potential talent among our children and youth.

Over the past few years, the Federal role has been substantially expanded, but it is still the responsibility of the states to recognize and assume the responsibility of the education of the gifted and talented as an integral part of their total educational spectrum. Since each of the fifty states has its own constitution, considerable variations may be found in the state constitutions with respect to education. Some of the provisions are up-to-date and well conceived; others are antiquated and inadequate to the extent of impeding both general and special education programs.

During recent years there has been a viable thrust by a large number of states to develop statutes to assist each and every child to maximize their full potential. State legislators across the nation are responding to the needs of general and special education to stay "in tune with the times."

With the recent Federal thrust in special education, many state statutes are being repealed and amended to reflect the national interest in meeting the needs of all exceptional children. The Connecticut statute for special education which includes the gifted and talented (Section 10-76a-j) has reflected the implications of the total exceptionality concept for over twelve years.

In order for state educational statutes to promote and facilitate good educational programming at the local level, they should be enacted and organized in conformity with sound principles of educational legislation. The following general principles should be followed in planning, studying, designing and implementing educational statutes. They should be: (1) in agreement with the provisions of the state constitution. Disregard for this principle frequently leads to litigation. (2) more specific than constitutional provisions, they should be general enough to enable state and local boards of education to plan and operate without needless handicaps and restrictions. (3) stated in unmistakably clear terms so as to convey the precise intent of the legislation. (4) codified periodically and systematically eliminating or amending provisions which are obsolete.

With the present needs facing both the Federal and State levels relative to the education of all exceptional children, it should serve a significant purpose for the Congress and State legislators along with U. S. O. E. and State Boards of Education to analyze, appraise and update special education statutes. The cost of recodification is small when compared with the cost of litigation growing out of misunderstanding of distorted and vaguely written statutes for special education of a states' children and youth.

II. HISTORICAL PERSPECTIVE

John Hersey, the author, was appointed Chairperson of a special study committee in the late-fifties to study the needs of Connecticut's gifted and talented children and youth. The Hersey Committee conducted a comprehensive study of the needs for special programs for the gifted and talented in Connecticut. This committee was composed of noted state educators and people drawn from various lay groups throughout the state. The committee employed Helen Erskine Roberts of California to analyze and synthesize all of the data gathered by the committee to make its report to the State Board of Education. The Roberts Report was submitted to the State Board of Education in 1959 but little or no action was taken at that time.

About six years later, the State Board of Education established the education of the gifted and talented as a priority for a new full-time position within the Bureau of Pupil Personnel and Special Educational Services. This position was filled in September 1966 and the consultant for the gifted and talented was hired to provide technical assistance and leadership to local school districts, professional and lay personnel and colleges and universities relative to the education of the gifted and talented.

Concurrently, in recognition of a need for a review of the statutory provisions and regulations for the education of all exceptional children in Connecticut, the State Board of Education contracted for a comprehensive study to be undertaken over a five month period in mid 1966. Dr. R. Daniel Chubbuck, Chairman of the Department of Educational Administration at the University of Bridgeport was named as the director and principal investigator of this study.

Dr. Chubbuck was charged with undertaking a comprehensive study of existing legislation related to the education of exceptional children (including the handicapped and the gifted and talented) and preparing a report for submission to the State Board of Education no later than September 20, 1966. The report included:

(a) An analysis of procedures. policies and problems which existed in relation to this legislation and its contribution to the development of adequate educational programs and services for exceptional children.

(b) An analysis of other conditions which existed in the state which affected the efforts of local educational agencies to provide sound programs and services for all exceptional children.

(c) A synthesis of the concerns and recommendations of persons within the state interested in exceptional children, including educators, parents, and health, mental health and welfare workers.

(d) Recommendations concerning legislative policies and procedures to the State Board of Education designed to facilitate more adequate programs and services for all exceptional children in Connecticut.

Dr. Chubbuck incorporated the above-mentioned procedures into his study. Orientation, consultation, conference, study of documents, formulation of generalizations, re-examinations, writing, presentation, reevaluation and final crystalization were the steps utilized in the study. Conferences were held with State Department personnel, Council for Exceptional Children staff at the national level, special education personnel from the local level, parents, school administrators, university staff and many other interested people.

The governor called various meetings involving individuals from institutions and organizations interested in exceptional children to "consult with" the director and "review suggestions for legislation."

The Connecticut Legislative Commission was involved for the purpose of sharing the emerging generalizations with them and gaining a view of how the report could be translated into a bill to be presented to the legislature at a later date.

The study did find a number of gaps and overlaps occurring in the existing legislation for exceptional children. Some was mandatory and others were left to local initiative. Some statutes delegated insufficient authority for enforcement of the mandate and for leadership and direction by the State Department of Education.

There existed a severe shortage of professional personnel competent to diagnose, direct, experiment, evaluate, and program for exceptional children. This observation indicated that institutions of higher learning had insufficient financial support by State and Federal Legislation to train such personnel.

Conflicts for control and lack of specific responsibility were serious shortcomings which existed as a consequence of gaps and overlaps in legislation and regulation. These conflicts and intervals occurred among state and local agencies and within the educational establishment.

One of the most serious gaps uncovered in the study was the complete absence of legislation to provide for the education of gifted and talented pupils, those who are intellectually unchallenged by differentiated curriculum and strategy and those who have outstanding talents in the creative arts (music, visual and performing arts).

The study found a limitation of financial support to be a major block to adequate provisions for exceptional children. Furthermore, the study found that none of the needs were fully met; some were much more adequately served than others. It was found that the pattern of differences in classification for state funding complicated procedures for claiming state aid.

Inadequate and inequitable funding encouraged the employment of less than competent personnel, improper grouping, disproportionate pupil-teacher ratios and inadequate screening and selection processes and evaluative services. The study was aimed at revision of statutes and concomitant regulatory action to preserve the good work which was being done while advancing the cause of equality of opportunity through provisions for individualized instruction.

The principle of equality of educational opportunities based on the intensive worth and unique nature of the human individual dictated that special education would be provided for all exceptionalities. The study interpreted exceptionalities to be encountered over the entire range of the school population and included those who suffered physical, mental and emotional handicaps, those who became bored because of their speed of perception, those who had special gifts for traditional disciplines and for creative arts and even those who had physical skills of notable extent.

This study pointed to an all encompassing piece of legislature for all exceptional children. The report recommended that all exceptional children be serviced under an umbrella type of state legislation. The challenge was a large one for the State Board and the General Assembly, but it was met in a cooperative and dedicated effort by both bodies.

The State Board of Education approved the Chubbuck Report in the fall of 1966 and the Legislative Review Commission began work almost immediately to translate the generalizations of the study into a bill to be presented to the General Assembly in the February 1967 session.

Members of the Legislative Review Commission and their professional staff members worked very closely with the professional personnel of the State Department of Education while they were translating the report into a bill to be submitted to the General Assembly. Many informal meetings were held to hammer out a quality product to service the needs of all of Connecticut's exceptional children. The basic objective of the bill was to include all exceptional children and youth under an umbrella bill and allow excess cost reimbursement for each exceptionality. It was to become known as a "special education umbrella bill" which mandated school districts to provide programs and services to its mentally retarded, physically handicapped, socially and emotionally maladjusted, neurologically impaired and those suffering from an identifiable learning disability, and make it permissive for school districts to provide special education to pupils with extraordinary learning ability and/or outstanding talent in the creative arts. The bill which eventually was enacted into a statute, with a minimal number of changes as passed by the General Assembly, was an outstanding effort and example of cooperation and communication among many groups including the General Assembly and the State Board of Education which had to implement the statute in each of the state's 169 school districts. The bill, as submitted and eventually passed, allowed the State Board of Education wide latitude in implementing the legislation at the local level. Few, if any definitions, appear in the statute. The flexibility allowed the State Board to define various types of exceptional children through administrative regulations. Specific wording mandated the State Board to provide for the development and supervision of the educational programs for these pupils; it provided the State Board with the opportunity to regulate curriculum, conditions of instruction, physical facilities and equipment, class size, admission of pupils, and the requirements respecting necessary special services and instruction. However, the statute mandated that the State Board designate by administration regulations the procedures for identifying all categories of exceptional children. It also mandated that local school districts shall provide these programs for exceptional children and said that the State would reimburse two-thirds of the excess cost of the program and the various components of the programs eligible for reimbursement would include:

1. a. Professional Personnel - all instructional personnel who are under contract to the local school district who spend more than one-half of their time providing special instruction to exceptional children.

b. Ancillary Personnel - this category includes all types of supportive personnel (psychologists, counselors, etc.) including clerical assistance and paraprofessionel personnel.

2. Equipment and Materials - the statute provides for reimbursement of such items directly related to the special education program.

3. Transportation - the districts are reimbursed for any transportation needed above and beyond that normally provided under the general transportaion policy of the school district.

4. Special Consultative Services - this category covers the need for personnel who are not under contract to the school district. It allows the employment of non-certified personnel to assist in the identification of, the programming for, and the instruction of exceptional children (artists, musicians, dancers, planning consultants, etc.) Example. This allows a district to provide in-service training in all exceptionalities with the cost of such becoming a reimbursable item under the statute.

5. Rental of Facilities - the statute allows rental of space to provide instruction and/or services to exceptional children. For example, portable classrooms, available space in the city or town which meet the various building codes for school buildings.

It is significant to note that Secion 10-76(a-j) of the Connecticut General Statutes predicates its excess cost reimbursement on programs and services provided to exceptional children rather than the numbers of children involved in the program. This type of statutory approach does not limit programming for exceptional children to a per pupil cost basis which sometimes limits the quality of the program and services provided to exceptional children and youth. The Connecticut statute allows the local district to design, develop and implement a special education program for a group(s) of exceptional children and youth and bases the approval of the program and services on the quality of the key components of the program to be provided, not on a per pupil basis.

The State Board of Education has developed specific policies and procedures relative to reimbursement of gifted and talented programs. One of the major components of these policies is that each local school district program seeking reimbursement under Section 10-76 must submit a prior approval application to the State Board of Education at least forty-five days prior to the implementation of the program. (Please refer to Policies, Procedures and Guidelines for Gifted and Talented Programs under Section 10-76 of the General Statutes. Revised Fall 1976.)

STATUTORY COMPONENT FOR THE GIFTED AND TALENTED
Under Section 10-76(a-j)

A. General

The Statutory component in Connecticut is part of the total exceptionality statute. There are two basic differences in the gifted and talented component: (1) it is permissive and (2) it must be done "as part of the public school program."

This component represents an essential part of the State Board of Education's effort to initiate, expand and improve special programs and services to its children and youth with extraordinary learning ability and outstanding talent in the creative arts. Section 10-76 of the Connecticut General Statutes (a-j) is considered to be exemplary for the gifted and talented because of the broadened concept of definitions allowed the State Board of Education under Administrative Regulations approved by the State Board of Education and General Assembly:

1. "Extraordinary learning ability" is deemed to be the power to learn possessed by the top five per cent of the students in a school district as chosen by the special education planning and placement team on the basis of (1) performance on relevant standardized measuring instruments or (2) demonstrated or potential academic achievement or intellectual creativity.

2. "Outstanding talent in the creative arts" is deemed to be that talent possessed by the top five per cent of the students in a school district who have been chosen by the special education planning and placement team on the basis of demonstrated or potential achievement in music, the visual arts or the performing arts.

It should be noted that a local school district could provide for upwards to ten per cent of its school population, if the broadened concept of each definition is fully utilized. The definitions allow school districts to work with both demonstrated abilities and potential to gain such abilities. The five per cent factor is not an automatic or magic figure nor may it be used for one small segment of the definition. The statute specifically requires that all identification criteria must be approved by the State. Identification becomes quite complex in the approval process to prevent loose or unreasonable criteria from being utilized. Another reason that the statute is exemplary, is the fact that it was the first state statute in the nation to specifically designate special programming for children and youth with outstanding talents in the creative arts (music, visual arts, and the performing arts) for reimbursement. For example, a student may be identified who is not intellectually gifted, but possesses outstanding ability in sculpture, media, film making, dance, etc.

The above indicates the broad concepts developed under the statutes and regulations to provide for a greater number of various types of gifted and talented in Connecticut's school populations.

B. Excess Cost Reimbursement to Local School Districts

State statutes, in many states, merely signify intent by inserting wording relative to the gifted and talented in either a general statute or one relating to special education. Connecticut feels that the most consequential aspect of the statute, as far as the gifted and talented are concerned, is the provision for adequate funding to local school districts. A large number of well-intentioned school districts that formerly could not afford to make provisions for their gifted and talented now have a vehicle for implementing programs; and it is for this reason that we believe that state legislation with proper funding is a necessary component for effective state action in programming for the gifted and talented.

At the present time, a legislative position is being taken by the State Board of Education to increase the reimbursement of programs to seventy percent and to make pre-payment to school districts rather than direct a reimbursement program. The State Advisory Committee on Special Education and the State Board of Education are studying the necessary steps to change the statute from a permissive nature to one of mandation. Bills relative to such action are being submitted during 1976-77-78 sessions of the General Assembly.

To summarize, the State Board of Education presently reimburses school districts two-thirds of the excess cost of programs and/or services to the gifted and talented. This includes the cost of all professional and para-professional personnel, equipment and materials, transportation, special consultative services and rental of space. The program must be submitted for prior approval (see pp. 5-7, Policies, Procedures and Guidelines for Gifted and Talented Programs under Section 10-76 of the General Statutes. Connecticut State Department of Education. Fall 1976.)

PROFESSIONAL DEVELOPMENT

The professional development component of the gifted and talented programs in Connecticut takes on two basic elements: One is the element of graduate study and the other is the element of professional development through in-service education at the local district level.

A. Graduate and Undergraduate Training Programs

Working in cooperation with the State Board of Education, the States' colleges and universities have responded to the needs of increasing numbers of professional personnel who are interested in taking course work or advanced degree programs to improve their skills to work with the gifted and talented of Connecticut. These course offerings range from the basic courses on the gifted and talented through specific courses on curriculum, differentiated teaching strategies and advanced seminar work.

The University of Connecticut's School of Education through the leadership of Dr. Joseph S. Renzulli has developed a complete advanced degree program (Masters, Sixth year, Doctorate) for professional personnel accepted for training programs in the area of the gifted and talented. Southern Connecticut State College in New Haven has a relatively new graduate program for training professional personnel in this area of special education. This Master's program is under the direction of Dr. Arnold Fassler, Chairperson of the Department of Special Education. St. Joseph College in West Hartford along with Central Connecticut State College and the University of Hartford offer course sequences in the education of the gifted and talented.

Recently, Dr. Randolph Nelson of the University of Bridgeport offers course work at the graduate level entitled "Career Education for the Gifted and Talented." At various times, both Eastern and Western Connecticut State Colleges hold special summer workshops on the gifted and talented. Recently, Trinity College, University of Hartford, and

Fairfield University have added graduate courses in their Education Department to train professional personnel in the education of the gifted and talented.

In the fall of 1966, only one course was being offered on the education of the gifted and talented in the institutions of higher learning in Connecticut. Twelve years later, we have three graduate level training programs and seven other colleges offering courses in this area of special education.

B. Inservice Training

The second element of professional development is concerned with a comprehensive in-service training thrust to design and develop training processes for professional and para-professional personnel working with the gifted and talented at the school district level. The State Board of Education, through the Bureau of Pupil Personnel and Special Educational Services offers a wide variety of in-service professional development opportunities to the school districts.

The in-service components designed and developed by the Department of Education are sequentially developed to offer different levels of instruction to professional personnel in the field through workshops and institutes utilizing a wide variety of slide tapes, printed materials and outside consultants.

The three dimensions of our in-service training programs include 1. Areas of the Gifted and Talented (the various types of gifted and talented children and youth a district may work with); 2. Level of Entry and Expectancy of Participants (Orientation, Design and Development of a Program, Implementation and Initiation, Leadership Training); 3. Content-Specific components and/or categories of information (Example. Identification, Needs Assessment, Differentiated strategies and Curriculum, etc.) The specific process of our in-service program is fully described in a publication entitled, "Models for Program Development in In-Service Education for the Gifted and Talented." Connecticut State Department of Education, Bureau of Pupil Personnel and Special Educational Services, 1974.

For example, utilizing both state and Federal funds, the Bureau has provided the following types of in-service training in the past twelve years.

1. 1150 Planning, Development and Update sessions in local school districts involving approximately 9,000 professional and lay personnel in the education of the gifted and talented.

2. 11 Annual Update Conferences to update personnel from over the entire State on the latest information available on educating the gifted and talented. These June conferences average between 400 - 600 personnel from on-going programs.

3. 35 Regional Orientation Workshops aimed at the orientation of general educators to make them more familiar with the special educational needs of the gifted and talented. These programs have involved over 5500 personnel.

4. 610 Presentations to PTA's, parent groups, civic and lay organizations covering approximately 7200 people.

5. 7 Northeast Regional Conferences on the Gifted and Talented involving over 2500 participants.

C. Regional Approach to Inservice Training

The State Board of Education was awarded a Federal grant under Section 404 of P. L. 93-380 to fill one of the major gaps in its professional development component. The award became effective October 1, 1977 with the potential to continue the grant over a two year period through September 30, 1979.

One of the major objectives of the Federal grant is to design a formal inservice training structure linking our six (6) Regional Education Service Centers (RESC's) throughout the State, thus a network of resource centers and persons will be formed to prepare professional personnel in the education of the gifted and talented. Hopefully, this structure and its implementation will serve as a model for other states in preparing professional personnel to work with the gifted and talented at the local level.

Basically, these are the professional development activities pursued by the State Board of Education which are carefully articulated and coordinated with such programs at the various institutions of higher learning.

These are just some of the inservice activities carried on by the State Department which are carefully articulated and coordinated with the professional development programs at the various institutions of higher learning.

FULL-TIME CONSULTATIVE SERVICES

The third major component needed by any of the fifty states in order to provide adequate programs and/or services to each state's group of gifted and talented children and youth.

Connecticut conducted a broad search for a full-time director of programs for the gifted and talented in 1966. The State Education Agency has employed a full-time consultant since late 1966 to provide a wide variety of technical assistance to local school districts, professional groups, colleges and universities and other groups and organizations interested in the education of the gifted and talented.

The role of a state director of gifted and talented programs is a multi-factored position. The person employed designs and develops a number of program strategies. A major portion of the consultants' time is spent in assisting school district personnel in designing, developing and implementing programs for the gifted and talented. Another major activity is one of professional development and working closely with colleges and universities to develop graduate level training programs. Further activities include development of publications and information to be disseminated to all groups interested in the gifted and talented: curriculum development, research, legislation, evaluation and developing models for new approaches to programs.

Consultants' Long Range Objectives

1. Objectives of the Program for the Gifted and Talented:

   A. Local Education Agencies will:

      1. Identify all gifted and talented pre-school and school aged children and youth in need of special education instruction and/or services.

      2. Initiate, expand or improve programs, i.e. differentiated instruction, curricula, services, etc. for the gifted and talented.

      3. Plan for and implement the evaluation of all special programs for the gifted and talented.

      4. Where appropriate and desirable, develop coordinated and cooperative regional efforts including facilities for the gifted and talented.

      5. Utilize information on successful programs, curricula, and services for the gifted and talented.

      6. Design, develop, implement and/or participate in inservice training programs designed to provide or upgrade skills of personnel involved in or related to the education of the gifted and talented.

   B. The State Education Agency will:

      1. Provide full-time consultative services to LEA's, institutions of higher learning and other appropriate target groups to lend professional technical assistance to the designing and development of programs to meet the needs of the gifted and talented.

      2. Provide supportive resource materials through regional centers to assist LEA's and other appropriate groups in giving better services to the gifted and talented.

      3. Expand or improve existing special education legislation for the gifted and talented.

      4. Identify and disseminate information on other state, Federal and private funding sources for gifted and talented programs.

      5. Expand or improve existing guidelines to be used to implement LEA programs for the gifted and talented as part of a total state plan.

C. Colleges and Universities will:

1. Initiate new training programs or course sequences to train professional personnel in the education of the gifted and talented.

2. Adjust their current training programs commensurate with the demands for personnel at the LEA level.

3. Plan for and implement the evaluation of their professional development programs for the gifted and talented.

SPECIAL EDUCATION RESOURCE CENTER (SERC)

The Bureau of Pupil Personnel and Special Educational Services operates and maintains a state-wide information resource center for all exceptional children and youth in Hartford, Connecticut. It is located at the Hartford Graduate Center at 275 Windsor Street. This center maintains updated vertical files (15) and ERIC retrieval resources on the gifted and talented. Its library contains all current text books and materials on the gifted, talented and creative child.

The vertical files contain all types of information on programs, curriculum, identification, teaching strategies and materials from throughout Connecticut and the other states throughout the country. The Center serves as a basic focus of the state-wide delivery system in the state on gifted and talented children and youth.

STATE CLEARINGHOUSE ON THE GIFTED AND TALENTED

The State Department of Education maintains a State-wide Clearinghouse on the Gifted and Talented under a Federal grant from Section 404, P.L. 93-380. The Clearinghouse serves as a central depository of human, organizational, and material (i.e., programmatic, instructional and research) resources for the education of the gifted and talented. It also serves as the developer a network of Gifted and Talented Resource Centers in our six (6) Regional Education Service Centers throughout the State. By late 1979, the Clearinghouse will have the capability of providing a state-wide network of human resources, instructional materials, model programs, etc. to be utilized by all local school districts in the State.

The State Clearinghouse on the Gifted and Talented is located at:

Capitol Region Education Council (CREC)
212 King Philip Drive
West Hartford, Connecticut 06117
Tel. (203) 522-6137

PUBLICATIONS

A wide variance of materials are developed and disseminated by the State Department to local school districts and any other interested lay and professional personnel. The following includes:

- The Gifted Child in Connecticut: A Survey of Programs. William G. Vassar and Joseph S. Renzulli, 1967. Connecticut State Department of Education (Out of Print) 55 pp.

- The Gifted Children in Connecticut: Practical Suggestions for Programming. William G. Vassar and Joseph S. Renzulli. Connecticut State Department of Education. 1969. (Out of Print). 84 pp.

- CONN-CEPT I - Connecticut's Programming for the Gifted and Talented. A Collection of Materials for Program Development. Vassar, W.G., Howard, M.R. (Eds.) Connecticut State Department of Education, 1976. (Out of Print) 67 pp.

- CONN-CEPT I - Connecticut's Planning for the Gifted and Talented: Practical Suggestions for Gifted and Talented Program Development. Wm. G. Vassar and Sandra K. Krausnick (Eds.) Connecticut State Department of Education, Fall 1979. 136 pp. (Revised Edition).

- CONN-CEPT II - Connecticut's Programming for the Gifted and Talented. Differentiated Curriculum for the Gifted and Talented in Science and Mathematics. LaSalle, D. et al. Connecticut State Department of Education 1978. 100 pp.

- CONN-CEPT III - Connecticut's Programming for the Gifted and Talented. Once Upon A Building. Cobb, P., Cobb, S., and Dow, C.M.E. Connecticut State Department of Education. 1978. 100 pp.

- CONN-CEPT IV - Connecticut's Programming for the Gifted and Talented. Task Force Report on Identification in the Creative Arts. Stein, E., Saunders, R., Schmidt, L. (Eds.) Connecticut State Department of Education. 1978. (Out of Print) 56 pp.

- CONN-CEPT V - Connecticut's Programming for the Gifted and Talented. Task Force Report on Identification. White, A. (Ed.) Connecticut State Department of Education. (1978 Revised Edition) 71 pp.

- CONN-CEPT VI - Connecticut's Programming for the Gifted and Talented. Task Force Report on Evaluation and Resource Directory. White A., (Ed.) Connecticut State Department of Education. (1978 Revised Edition) 102 pp.

- CONN-CEPT VII - Connecticut's Programming for the Gifted and Talented. Task Force Report on Curriculum. White A., (Ed.) Connecticut State Department of Education. (1978 Revised Edition). 100 pp.

- CONN-CEPT VIII - Connecticut's Programming for the Gifted and Talented. A Sample List and Directory of State Approved Programs for the Gifted and Talented. Wm. G. Vassar (Ed.) Connecticut State Department of Education. Revised Edition 1979. 21 pp.

50 Articles (mimeo) from basic bibliographies to specific strategies on how to work with the gifted and talented in the local school districts.

4 Slide Presentations:

1. Connecticut's Commitment to Total Talent - (78 slides) Slide Tape Presentation - Content: The various services provided for the education of the gifted and talented to local school districts. (12 min.)
2. CONN-CEPT - How to Design, Develop and Implement a Program for the Gifted and Talented. (80 slides) Slide-Tape Presentation - Content: The slide tape describes the key components needed to design and develop a program for the gifted and talented at the local level.
3. Creative-Productive Teaching Strategies. F. Williams. (40 slides) Content: Eighteen (18) Creative-Productive Teaching Strategies.

IMPORTANT:

All slide presentations are limited to in-state use. #1 and #2 are available to interested groups and school districts through:

State Clearinghouse on Gifted and Talented
Capitol Region Education Council
212 King Philip Drive
West Hartford, Connecticut 06117
Tel: (203) 522-6137

VISITATION OF PROGRAMS

The Bureau maintains a publication entitled "Sample List of Programs and Resource People." This publication lists programs which can be visited along with the names and telephone numbers of contact people and a brief description of each such program. Although it is not a complete listing, it will give the reader an opportunity to get an idea of what types of programs are maintained in Connecticut.

SUMMARY

Connecticut's programs continue to grow and expand to meet the needs of the gifted and talented at the local district level. Substantial growth has occurred in 1976 and 1977 with thirty-six local programs added to a fast growing state-wide program. As of the spring of 1978, sixteen (16) additional school districts have signified intent with the Department to implement programs in the academic year 1978-79. Over seven thousand gifted and talented children and youth are now being served in urban, suburban and rural districts throughout the State.

The excitement of Connecticuts' programs lie not in numbers, but in the variety of new and different approaches that have been opened to the gifted and talented children and youth in the state. Our programs taken step by step, to increase the quantity and quality of programs for the gifted is directly related to three basic elements that each state should have if they are going to design and develop a program:

1. A sound legal and properly funded statute to provide reimbursement to local school districts when they provide special programs and/or services for the gifted and talented.

2. Provision of full-time consultative leadership by the State Education Agency to assist local school districts in programming for the gifted and talented.

3. A coordinated and articulated program for teacher training and retraining in the area of the gifted and talented ranging from preservice to inservice and advanced graduate study.

The successful coordination and articulation of these elements presents a major challenge to all concerned if a total program is going to be implemented at the state level. The goals set by a State can be accomplished through careful planning and a continuous effort on the part of legislators, professional educators and the lay public.

Connecticut has taken a major step forward toward a countdown to excellence for its gifted and talented children and youth in the past eight years. However, we have only scratched the surface of human resources residing in Connecticut public schools. We have only scratched the surface in meeting the needs of the many kinds of giftedness and talent in our schools. Only time, commitment and energy coupled with our present and future tools of implementation will tell the story of total talent retrieval in Connecticut in years to come.

POLICIES, PROCEDURES, GUIDELINES AND PRIOR APPROVAL APPLICATION

I. Introduction

The information and recommendations on the following pages have been developed for those professional personnel who have responsibility for designing programs for children and youth in Connecticut who have extraordinary learning ability and/or outstanding talent in the creative arts. This paper is specifically geared to the designing of special programs for such children and youth; one which is qualitatively different than those provided within the general education spectrum.

Section 10-76 (a-j) of the General Statutes permits reimbursement for such special programs when they are provided as part of the public school program and prior approved by the Secretary of the State Board of Education.

Reimbursement for such prior approved programs must be made to a local or regional school district under the legal provisions of Section 10-76 of the General Statutes.

We know that there are pupils who can be successful in the regular classroom with various adaptive measures taken in the curricular design while numbers of children and youth with demonstrated and potential for extraordinary learning ability and/or outstanding ability in the creative arts require programs and services identifiably different than those provided in the regular classroom. Such programs and/or services may have to be provided through special education as part of the public school program.

Planning and Placement Team - A Legal Responsibility of LEAs

The Department of Education places the responsibility on the Planning and Placement Team(s) in local school districts of performing the functions of 1. making an evaluation study of any child referred to the team, 2. determining whether the child requires special education, 3. recommending to the superintendent such placement, 4. plans for special instruction of such child.

Each gifted and child must be processed by a PPT in his local school district whether it be for purposes of placement in their own program or be sent to a tuition based program (i.e., Educational Center for the Arts, Talcott Mountain Science Center). The regional type programs may have their own standards for identification, etc., but the referral process must follow the PPT process in the LEA.

The PPT is made up of persons chosen from teaching, administrative and pupil personnel staff of the local school district. They are directly responsible to the Superintendent or his designate for any special education referral, evaluation and placement.

All PPT processes required by statute involving parent notification, etc. should be carefully followed according to ADMINISTRATIVE REGULATIONS FOR CHILDREN REQUIRING SPECIAL EDUCATION - SECTION 10-76 (a-j) OF THE GENERAL STATUTES.

Coordination with Administrative Regulations

These policies, procedures and guidelines should be carefully read concurrently with Administrative Regulations for Children Requiring Special Education. These regulations have specific references to definition(s), supervision and administration, budgeting, personnel, reimbursement, etc. which effect all exceptional children.

II. Legislative Provisions for the Gifted and Talented Under Section 10-76 (a-j) of General Statutes

A. Overview

Section 10-76 (a-j) of the Connecticut General Statutes permits local and regional school districts to provide special instructional and ancillary services to pupils with extraordinary learning ability and/or outstanding talent in the creative arts (10-76d(C)(2) who are special education children and youth described in subdivision (2) of subsection (3) of Section 10-76a.

The statute mandates under 10-76d(a) that all children requiring special education under 10-76a be identified. This includes the gifted and talented.

Thus, the statute mandates that each LEA identify its children and youth with E-L-A and o-t-ca but it makes it permissive to provide programs for such children and youth.

B. Reimbursement

Reimbursement for such identification and programming for the gifted and talented is exactly the same as for children and youth of other exceptionalities.

The concept for reimbursement is based on a two-thirds excess cost basis. Please refer to Section 10-76 (f) of the statute for specific clarification. The following items are reimbursable.

1. Instructional Personnel - those under contract to the LEAs who for at least one-half of their time, are assigned exclusively to the task of implementing and supervising such programs.
2. Pupil Personnel Staff - includes employees of an LEA, who, for at least one-third of their time are assigned exclusively to the task of identifying and implementing special education programs and/or services.
3. Equipment and Materials - includes such equipment and materials as used primarily to implement special education in accordance with regulations.
4. Tuition - paid to other LEAs, regional service centers operating state prior approved programs for the gifted and talented.

5. Transportation - for such services which are above and beyond those normally provided to transport a given youngster to school.

6. Rent - any expenditure made to rent space to provide a special program. Regulations require the LEA to substantiate the need for the rental of such facilities.

7. Special Consultative Services - services provided by persons other than employees of the LEA.

C. Prior Approval Application

To be reimbursable, prior approval applications for providing such special education programs must be approved in advance by the Department of Education. Reimbursement based on the excess cost concept is explained in Statute Section p. 7 (10-76g) of the 1977-78 Special Education: I-IV Administrative Regulations and General Guidelines.

III. Definitions - Intellectual/Arts - Administrative Regulations

"Extraordinary learning ability" is deemed to be the power to learn possessed by the top five percent of the students in a school district as chosen by the special education planning and placement team on the basis of (1) performance on relevant standardized measuring instruments or (2) demonstrated or potential academic achievement or intellectual creativity.

"Outstanding talent in the creative arts" is deemed to be that talent possessed by the top five percent of the students in a school district who have been chosen by the special education planning and placement team on the basis of demonstrated or potential achievement in music, the visual arts or the performing arts.

A. Guidelines for Implementation

It should be noted that a local school district has the potential to provide for upward to ten percent of its school population, if the broadened concept of each definition is utilized.

For example, extraordinary learning ability allows for 5% of the population involved (K-4, 5-6-7, etc.). However, if the district elects to work with only one segment of the population i.e., high IQ, high achieving pupils, it is suggested that a single target group such as this be limited to 1-3%. This would allow the district to include other target groups (high creative producers, potential, underachievers) to complete the five percent factor.

The five percent factor is not automatic nor is it a magic figure. The school district must assure the Department that these children have been identified through multiple criteria and that the five percent factor is not limited to one small segment of giftedness. The same concept is to be applied when utilizing the definitions relative to "outstanding talent in the creative arts."

Screening and identification processes become quite complex when one is developing such criteria in the prior approval process. Each target group of pupils being identified must be processed by multiple criteria which is reasonable and prevents loose or unreasonable criteria from being utilized. If an LEA, identifies two target groups of gifted and/or talented, they must submit separate criteria for both groups.

IV. SCREENING AND IDENTIFICATION PROCEDURES

A. Responsibility for Formulating Screening and Identification Process

The responsibility for the screening and identification of eligible children and youth rests with the superintendent of schools or a professional staff member of the school district to whom he may delagate this responsibility. This professional person responsible for the screening and identification process will assume the duties of designing a planning and placement team for the gifted and talented as required by Section 10-76 (a-j).

B. Screening and Identification Criteria

Screening and identification criteria should be based on a study of all available evidence as to the pupil's ability and/or potential by personnel qualified to administer and interpret:

1. appropriate standardized tests
2. judge demonstrated ability, potential, intellectually creativity and leadership
3. recognize outstanding talent in the creative arts

C. Please utilize CONN-CEPT V - Task Force Report on Identification Connecticut State Department of Education (Revised January 1978)

D. Approval of Identification Criteria - Statutory Requirement

Section 10-76 of the General Statutes requires that the screening and identification criteria for those who are gifted and talented must be approved by the State Department of Education.

E. Conceptual Items for Consideration in Screening and Identification Criteria

1. Extraordinary Learning Ability

a. If standardized tests are utilized, very superior scores on appropriate standardized tests for a criterion group should be indicated. Criteria for "very superior" might be the upper two or three percent of an appropriate criterion group or scores which are at least two standard deviations above the local norms. When a school district falls below the national norms; then appropriate measures to measure potential should be applied.

b. Judgments of teachers, pupil personnel specialists, administrators and supervisors who are familiar with the pupil's demonstrated and potential ability. (See CONN-CEPT V for examples of check lists, rating scales, etc.).

c. Utilization of a multi-criteria approach is necessary. A number of objective and subjective items should be used to identify any target group. These may include appropriate check lists, rating scales, etc.

d. Intense interest and involvement in a specific intellectual area.

e. Peer Nomination

2. Additional items of evidence used in the creative arts category should include:

   a. Evidence of advanced skills, imaginative insight, intense interest and involvement.

   b. Judgments of outstanding talent based on appraisals of specialized teachers, pupil personnel specialists, experts in the field and/or others who are qualified to evaluate the pupil's demonstrated and potential talent. (Refer to CONN-CEPT IV - Identifying the Talented in the Arts, Connecticut State Department of Education. (May 1978).

The procedures have been designed to avoid arbitrary cut-off points or limitations if the LEA wants to do so. However, if the LEA chooses to use any standardized tests they must conform with Section E-1-a above. The identification process should identify a small percentage of pupils with extraordinary ability and outstanding talent whose needs are such that they cannot be met in regular school program.

V. MINIMUM STANDARDS FOR PRIOR APPROVED PROGRAMS

The designing and developing of programs for pupils who are gifted and talented should include the following key components:

A. A written plan for programs from planning to implementation must be submitted to the State Department of Education for prior approval and should include the following steps:

1. Needs for Program - the extent to which the program is needed by children at specific grade levels and in various target groups and cannot be provided within the general curriculum and regular classroom offerings.

2. Philosophy of Program - the selection of students, staff, the development of differentiated curriculum and instruction will be dictated by philosophy of the program. Developing a program without articulating purpose with practice is like playing first base without understanding why.

3. Goal(s) - Program - Long Range

4. Objectives

    a. Planning

    b. Pupil

    c. Teacher

    d. Environmental

5. Target Group(s) of Pupils to be Served - which group(s) of gifted and talented pupils have the greatest need for a program, grade levels included, and number of pupils to be involved in the program. For example, artistically talented, intellectually gifted, talented in music, etc.

6. Screening and Identification Procedures - each target group selected must be screened and identified. The procedures for screening and identification must be sufficiently comprehensive to screen and identify each target group of children and youth included in A-5 above.

    Such procedures must be accomplished by use of multiple criteria, such as intelligence tests, achievement and aptitude tests, creativity tests, peer nominations, teacher check lists and rating scales, cultural norms or other predictive measures. Again please use CONN-CEPT V.

7. Administrative Design(s) - there are various designs for bringing pupils together or providing space or facilities for the instructional aspects of the program. Such designs may embrace regional centers, resource centers in the school district or within a school, resource rooms, itinerant teacher approaches, community mentors, seminars, etc.

8. Differentiated Instruction - (program and/or services) the process which is adaptable to varying levels of talent:

    a. Differentiated Curriculum - one that involves experiences and activities which are qualitatively different from those provided in the regular classroom, and do involve a high level of cognitive and affective concepts and processes beyond those normally provided in the regular classroom.

    b. Differentiated Teaching Strategies - these are teaching strategies which will accommodate the unique learning styles of the target groups being programmed for. For example, utilizing the higher mental processes of analysis, synthesis and evaluative thinking in working with the target group of high achieving, highly motivated children and youth.

c. CONN-CEPT II, CONN-CEPT III and CONN-CEPT VII are all written to further amplify this section. If these publications are not available in your LEA, you should contact the State Department for copies of those directly related to differentiated curriculum.

9. Amount of Time Spent by Pupils in Program - pupils should be involved in these differentiated programs for an appropriate and sufficient amount of time to assure that the "qualitatively different" special education activities will have a significant effect on reaching the objectives set for them.

10. Articulation and Coordination - the special program should include evidence that it is being developed in relationship to the total school program. Careful planning should be undertaken to articulating and coordinating the special program with the general education program. Serious considerations should be given to articulating - the various school levels being worked with i.e. elementary, middle school, etc.

11. Professional Staff Qualifications - careful attention should be given to the selection of both the instructional and ancillary staff who will work with the pupils. No special certification have been established. Teachers should hold a certificate appropriate for the age level of the program and should have professional and personal qualifications judged necessary for work with these children and youth. Please refer to CONN-CEPT I - Practical Suggestions for Programs, Connecticut State Department of Education, October 1978.

    Primary Requirements - it is urged that primary requirements for a teacher include: a high degree of self-understanding and security; a warmness toward and acceptance of these pupils; professional background which includes advanced graduate study relevant to the teaching assignment and which increases his understanding of gifted and talented pupils; successful regular classroom teaching experience; a willingness to meet regularly with other staff members.

12. Special Education Consultative Services - there may be a need for special education consultant services provided by personnel other than employees of the school district. Personnel contracted with for these services need not be certified since their services are being utilized in a non-instructional category or under the supervision of certified personnel. For example, the school district may contract with musicians and artists to evaluate outstanding talent in the creative arts; to advise and assist in planning appropriate special education programs for these pupils; to assist in special instruction of pupils under the supervision of certified personnel; and to engage in other activities which assist teachers to work more effectively with eligible pupils.

13. Evaluation - both process and product should be taken into consideration. The program and pupil program should be evaluated in terms of the qualitatively different objectives designed for the program and the children and youth involved. This will require the use of both objective and subjective processes that take into account the variety of important program dimensions. Please refer to CONN-CEPT VI - Evaluation. Connecticut State Department of Education, January 1978 for further information.

14. Budget - this should directly reflect the interdependent components listed (1-13) above. (Please refer to pages 5-6-7 for further amplification.

1. Personnel

   a. Any instructional professional spending more than 50% of his or her time in the special program.

   b. Any pupil personnel specialist (counselor, psychologist, etc.) spending more than 33 1/3% of his or her time in the special program.

   c. List and describe with qualifications all professional and clerical personnel, etc. for whom reimbursement is being requested and the amount of time they are to spend with the program. (Please refer to 1977-78 Special Education: I-V Administrative Regulations and Guidelines).

2. Instructional Equipment and Materials

   List and describe costs of special instructional equipment and materials required for conducting the program. This is a category to cover costs of special instructional equipment and materials which are necessary for the special education program and which will be used primarily for those pupils in such a program. Specific instructional materials beyond the level used in the regular program and which are purchased as part of the special education program would be allowed. In some cases, rental of equipment may be reimbursable. For example, the purchase of musical instruments is not reimbursable; however, in cases where an instrument is necessary and no other source is available, the rental of a particular instrument may be reimbursable. (Please refer to 1977-78 Special Education: I-V Administrative Regulations and Guidelines).

3. Special Consultative Services

   List and describe personnel (other than regular employees of the board of education) with their costs and qualification. This is a category to cover special services provided by personnel other than employees of the school district. (See Section V-A #12 for amplification).

4. Special Education Tuition

   Payments made to other school districts, private and public organizations for services to the gifted and talented who remain pupils in your school districts, but may need services beyond those provided in the district (i.e. Talcott Mountain Science Center, Educational Center for the Arts, Creative Arts Community, etc.).

5. Transportation

Only such transportation which is provided "above and beyond" that normally provided for the purposes of general education.

6. Rental

This is allowable only when such rent is necessary because of the special education programs. Satisfactory evidence must be presented in this prior approval to show that it is in the best of interest of the gifted and talented children and youth involved.

VI. PROGRAM APPROVAL

Local school districts seeking reimbursement from the State Board of Education under Section 10-76 of the Connecticut General Statutes must submit an application for prior approval before the program becomes operational. The prior approval application, must be in narrative form and must include the following:

A. COVER PAGE

The cover page should be a reasonable fascimile of the following form on page 10.

VII. APPLICATIONS FOR PRIOR APPROVAL

Such application should be submitted in duplicate no later than forty-five days prior to the implementation of the program to:

William G. Vassar
Consultant for Gifted
and Talented Programs
Connecticut State Department of Education
P. O. Box 2219
Hartford, Connecticut 06115
Telephone 566-3695

Application for Program Prior Approval
Gifted and Talented Program

to

Office of Gifted and Talented Programs
Bureau of Pupil Personnel and Special Educational Services
Division of Instructional Services
Connecticut State Department of Education

SCHOOL DISTRICT ______________________________

SUPERINTENDENT OF SCHOOLS ______________________

ADDRESS ____________________ ____________________ __________
Street Town Zip

TELEPHONE NO. __________

DIRECTOR OF PROGRAM ____________________________

ADDRESS ____________________ ____________________ __________
Street Town Zip

TELEPHONE NO. __________

SUPERINTENDENT OF SCHOOLS (Signature) ____________________ __________
Date

GRADE LEVELS INVOLVED IN PROGRAM ______________________

NO. OF CHILDREN INVOLVED IN PROGRAM ____________________

RECEIVED IN STATE DEPARTMENT OF EDUCATION ON ______________________
Date

____
By

APPROVED FOR OPERATION AND FUNDING ON ______________________
Date

____
By

ASSIGNED CODING NUMBER ______________________
(For State Department Use Only)

B. Narrative Section - the narrative section of this application must include amplification of all components listed under the foregoing section. V-A. Each component should become part of the application and will serve as the school districts existing plan for the gifted and talented.

1. Need for Program
2. Philosophy of Program
3. Goal(s)
4. Objectives
5. Target Group(s) of Children to be Served
    a. Grade Levels
    b. Number of Students Served
6. Screening and Identification Procedures
7. Administrative Design(s)
8. Differentiated Instruction
    a. Curriculum
    b. Teaching Strategies
9. Amount of Time Spent by Teachers in Program
10. Articulation and Coordination
11. Professional Staff Qualifications
12. Special Educational Consultative Services
13. Evaluation Procedures
14. Budget

CONNECTICUT RESOURCES

William G. Vassar
Consultant for Gifted and Talented Programs
Connecticut State Department of Education
P. O. Box 2219
Hartford, Connecticut 06115

Sigmund Abeles
Consultant for Science Education
Connecticut State Department of Education
P. O. Box 2219
Hartford, Connecticut 06115

Robert J. Saunders
Consultant for Art Education
Connecticut State Department of Education
P. O. Box 2219
Hartford, Connecticut 06115

Lloyd Schmidt
Consultant for Music Education
Connecticut State Department of Education
P. O. Box 2219
Hartford, Connecticut 06115

Connecticut Clearinghouse on Gifted and Talented
Jean Blanning, Coordinator
33 Vrendendale Avenue
Hartford, Connecticut 06106

Connecticut Association for the Gifted
Peter H. Cobb, President
259 Neubuc Avenue
East Hartford, Connecticut 06108

RESOURCE CENTERS

Area Cooperative Educational Services
(ACES) Peter C. Young, Director
800 Dixwell Avenue
New Haven, Connecticut 06511

Capitol Region Education Council
(CREC) John J. Allison, Director
212 King Philip Drive
West Hartford, Connecticut 06117

NARES
Northeast Area Regional Education Service
Howard Smith, Director
P. O. Box 436
Rt. 205, West Main Street
Wauregan, Connecticut 06387

Cooperative Educational Services
(CES) Peter Willner, Director
Roosevelt Middle School
P. O. Box 2087
11 Allan Road
Norwalk, Connecticut 06851

LEARN
Francis Robinson, Director
P. O. Box 220
East Lyme, Connecticut 06333

RESCUE
Regional Educational Services Concepts
(through) Unified Efforts
Russ Butera, Director
Hut Hill Road
Bridgewater, Connecticut 06752

CONNECTICUT STATE PUBLICATIONS

Division of Instructional Services
Bureau of Pupil Personnel and Special Educational Services
Hartford, Connecticut

CONN-CEPT II	Differentiated Curriculum for the Gifted and Talented in Science and Mathematics. Revised July 1978.
CONN-CEPT III	Once Upon A Building: Creating a Differentiated Learning Environment for the Gifted and Talented. 1977.
CONN-CEPT IV	Task Force Report on Identifying the Talented in the Creative Arts. March 1979.
CONN-CEPT V	Task Force Report on Identification: A Primer on Program Development for the Gifted and Talented. (Revised Edition 1978).
CONN-CEPT VI	Task Force Report on Evaluation and Resource Directory: A Primer on Program Development for the Gifted and Talented. (Revised Edition 1978).
CONN-CEPT VII	Task Force Report on Curriculum: A Primer on Program Development for the Gifted and Talented. (Revised Edition 1978).
CONN-CEPT VIII	A Sample List and Directory of State Approved Programs for the Gifted and Talented. (Revised Edition 1978).

CONNECTICUT COLLEGES AND UNIVERSITIES WITH TRAINING PROGRAMS IN GIFTED AND TALENTED EDUCATION

University of Connecticut
School of Education
Storrs, Connecticut 06268
Dr. Joseph S. Renzulli

Southern Connecticut State College
School of Education
Crescent Street
New Haven, Connecticut 06268

NATIONAL RESOURCES, ASSOCIATIONS AND FOUNDATIONS

National Association for Gifted Children
217 Gregory Drive
Hot Springs, Arkansas 71901

American Association for Gifted Children
15 Grammercy Park
New York, New York 10003

The Association for the Gifted
The Council for Exceptional Children
1920 Association Drive
Reston, Virginia 22091

National/State Leadership Training
Institute on the Gifted and Talented
Civic Center Tower Building
316 W. 2nd Street, Suite PH-C
Los Angeles, California 90012

Creative Education Foundation, Inc.
State University College at Buffalo
Chase Hall
1300 Elmwood Avenue
Buffalo, New York 14222

Institute of Behavioral
Research in Creativity
1417 South 11th Street, East
Salt Lake City, Utah 84105

ERIC Clearinghouse on the Gifted
and Talented
Council of Exceptional Children
1920 Association Drive
Reston, Virginia 22091

Office of Gifted and Talented
United States Office of Education
ROB #3, Room 2100
Washington, D. C. 20202

NATIONAL JOURNALS

Gifted Child Quarterly
217 Gregory Drive
Hot Springs, Arkansas 71901

Journal of Education of the Gifted
1920 Association Drive
Reston, Virginia 22091

Roeper Publications
2190 N. Woodward
Bloomfield Hills, Michigan 48013

G/C/T
Box 66654
Mobile, Alabama 36606

Journal of Creative Behavior
State College at Buffalo
1300 Elmwood Avenue
Buffalo, New York 14222

Potential Learning Magazine
530 University Avenue
Palo Alto, California 94301

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Compiled by Sandra K. Krausnick

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